Examining the Impact of New Regulation on Sustainable Investments, Banking Strategies, and Client Choices

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Preface

This report is the final result of my research conducted for the organisation, which is written to fulfill the graduation requirements of the Industrial Engineering and Management master's program at the University of Twente. I really enjoyed my time at the organisation with the open and good ambiance. I could always turn to colleagues for questions or help so I would like to thank them for this as well!

I would like to thank my supervisor from the organisation for guiding me throughout the process while also giving me a lot of freedom to decide my research scope. She played a very active role in supervising me during my thesis. I could always ask for her help and advice.

Furthermore, I want to thank my first supervisor from the University of Twente, Berend Roorda for all his time and effort. His feedback helped me a lot in improving my research. I also want to thank my second supervisor, Reinoud Joosten.

Lastly, I want to thank my family and friends for their support during this thesis.

I hope you enjoy reading my master's thesis!

Sarah de Best

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Management summary

We explore the discrepancies between the calculated and chosen sustainability profiles of investment clients of a Dutch bank, hereafter referred to as the organisation. The motivation for the research is the MiFID II ESG regulation that came into force on the 2nd of August 2022, which forces the organisation to determine the sustainability preferences of its investment clients. In addition, we investigate the impact of sustainability on the return of clients' investment portfolios. We formulate the following research question:

"Is there a discrepancy between the calculated and chosen sustainability profile of Investment Advice and Discretionary Portfolio Management clients? To what extent does sustainability affect the performance of investment portfolios of Investment Advice and Discretionary Portfolio Management clients?"

We performed a analysis with the data resulting from the Investor profile Questionnaire (IPQ), a questionnaire used to determine which financial product, risk profile and sustainability profile are appropriate for a client. It shows that there are indeed discrepancies between the calculated and chosen sustainability profiles of clients. In Investment Advice, 40% of the clients choose a sustainability profile that is different from the sustainability profile calculated in the IPQ. For Discretionary Portfolio Management this percentage is 25%. The reasons for these discrepancies are that clients would like to keep their current financial products, clients want a financial product that does not match with their calculated sustainability profile, clients have no ESG preferences and clients do not understand the IPQ's questions. We also found out that mistakes are currently being made in the process: clients have a chosen sustainability profile that cannot be combined with the financial product the clients have. It appears that these mistakes are made due to incorrect completion of the IPQ by advisors of the organisation, and due to human errors made by the advisors.

We furthermore recommend the organisation to stop offering the financial product Customized Advice. This is the only financial product in Investment Advice that is still non-sustainable, and quitting with this product increases the credibility of the organisation and its goal to become the most sustainable bank in The Netherlands. Furthermore, the data analysis shows us that 96% of the clients who own this financial product have a chosen profile that is sustainable. These clients can switch to financial product Active ESG (plus) Investment Advice (with a lower entry value (€500,000) and lower costs (4%) for the clients).

A literature study revealed the reasons why clients want to invest sustainably: creates sustainable impact (for future generations), higher returns, hedging future risks, tax benefits and for ethical reasons. Reasons why clients do not want to invest sustainable are: lower returns, questioning social impact, difficult, time-consuming and not much is known about it yet. We performed an additional literature study on the impact of sustainability on portfolio returns. Whereas some literature studies indicated that the returns are higher from sustainable investment, other studies cannot find a relationship between sustainable investments and the returns. Using a financial analysis of the Income Mandate in the organisation, we see that in the period when the portfolio is sustainable, the difference between the benchmark and portfolio return is greater than in the period when the portfolio is non-sustainable.

Concluding, we created insight into the changes brought about by the MiFID II ESG regulation. We recommend that the organisation continues to monitor developments around sustainable investing closely and conduct further research so that the organisation can tailor its financial products and services to its clients' sustainability needs while remaining compliant with regulation.

Glossary

AFM	The Dutch Authority for the Financial Markets (AFM) is the Dutch supervisor of financial markets.
Discretionary Portfolio Management (DPM) clients	Discretionary Portfolio Management (DPM) clients are clients who have their assets invested by the organisation.
ESG	ESG stands for environmental, social and governance. It is a framework that helps measure, analyse and assess an organisation's impact on the ESG criteria.
FSMA	Financial Services and Markets Authority (FSMA) is a contact point to which financial consumers as well as companies, institutions and individuals can turn for information and clarification of the regulations in force.
Investment Advice clients	Investment Advice clients are clients who invest themselves but receive advice and guidance from the investment advisor.
IPQ	The Investor Profile Questionnaire (IPQ) is part of a legally required process in the organisation to get to know the client and its wishes. In the IPQ, the client indicated its investment preferences.
MiFID	The Markets in Financial Instruments Directive (MiFID) is a European directive for the regulation of investment services and regulated markets.
SFDR	The Sustainable Finance Disclosure Regulations (SFDR) is the name of the regulation that is part of the ESG change in MiFID.
Sustainability profile	A sustainability profile works the same as a risk profile. A client chooses a profile that it is comfortable with and that matches its ideals. The organisation must then advice or invest according to the clients preferences.
The organisation	The name of the company should not be mentioned in the report. The company is therefore referred to as the organisation.

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List of Abbreviations

AA	Asset Allocation
AFM	The Dutch Authority for the Financial Markets
DPM	Discretionary Portfolio Management
ESG	Environmental, Social and Governance
ESMA	European Securities and Market Authority
FSMA	Financial Services and Markets Authority
IPQ	Investor Profile Questionnaire
MiFID	Markets in Financial Instruments Directive
SFDR	Sustainable Finance Disclosure Regulation
SFR	Sustainable Finance Regulations
TAA	Tactical Asset Allocation

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1 Introduction

1.1 Description of the problem context

Since the 2nd of August 2022, the introduction of MiFID II ESG regulation has changed the regulations of investing for financial institutions. ESG stands for Environmental, Social, and Governance. ESG investing is a form of investing in which investments are selected for non-financial reasons (Daugaard, 2020) and therefore take into account the consequences for the environment and society as well.

The MiFID II ESG regulation integrates sustainability into the MiFID II regulation that came into effect after the 2008 financial crisis. The purpose of the MiFID II regulation was to restore trust in the financial sector and to protect investors. In addition, it had to provide transparency in the financial market. The aim of MiFID II ESG is to support the transition to a sustainable economy. The introduction of the regulations brings two major changes. It provides transparency on the ESG impact of investment products. This means that at a European level it is now determined when an instrument can or cannot be called "sustainable". Previously, financial institutions were allowed to determine this themselves. Second, it forces financial institutions to ask its clients about their sustainability preferences. The financial institutions must now incorporate these sustainability preferences of the clients into its investment policy.

The organisation for which we conduct this research is also affected by this new regulation. It is a Dutch bank divided into retail, private, and corporate banking. We performed research for the department which is responsible for mapping changes in laws and regulations. From this change, the department seeks to mitigate threats and create opportunities.

To comply with regulation, the organisation has written a new policy. This new policy describes how it determines sustainability preferences of its clients in Discretionary Portfolio Management and Investment Advice, two investment concepts. The organisation does this by clustering sustainability preferences into sustainability profiles. This means that clients can choose from different sustainability profiles. Table 1 depicts these sustainability profiles. The sustainability profiles are established based on the article numbers of the Sustainable Finance Disclosure Regulations (SFDR). These regulations include when we may label a product "sustainable" or "ESG".

Table 1: Sustainability profiles organisation.

Sustainability profile	Article Number SFDR
Non-Sustainable	6
ESG Starter	8
ESG-Advanced	8
Sustainable Impact	9
Taxonomy	10

The organisation initially provides a recommendation to the client which sustainability profile would best suit the client. This advice is given on the basis of a questionnaire to be completed by the client. The answers given by the client in the questionnaire are linked to a sustainability profile, which results in a calculated sustainability profile for the client. However, the client may choose a different sustainability profile.

Since the legislation has only been in effect for a year, the organisation still has very little insight into client's sustainability choices. To gain further insight, it would like to know if there are discrepancies between clients' calculated and chosen sustainability profiles and why clients choose to deviate from the calculated sustainability profile.

The effect of sustainable investing on the returns of investment portfolios is not yet fully understood. A study by a Dutch bank revealed that about half of the investors in the Netherlands think that sustainable investing yields less than non-sustainable investing (ANP, 2023). This is one of the reasons why investors indicate they are not yet investing sustainably. However, the organisation's goal is to become the most sustainable bank in the Netherlands, and it would like to encourage its clients to make sustainable investments. Therefore, the organisation would also like to understand more about the effect of sustainability on returns. This allows the organisation to give its clients more transparency in the future about the impact of sustainable investing on returns and so they hope to encourage more clients to invest sustainably.

1.2 Related problems

The introduction of the new regulation creates several problems in the organisation:

1. The organisation must comply with the new regulation. If it does not comply with this regulation, it can risk a fine.
2. The new regulation is very complex and has implications for the clients: their sustainability profile must be determined. Investment advisors must be able to clearly communicate the new regulations and the impact of these with its clients.
3. The current policy in the organisation must be adjusted. A new policy should be developed that determines the sustainability profile of the clients.
4. Clients receive a monthly report showing the performance of their investment portfolio. However, the introduction of the sustainability profile requires an adjustment to the current monthly report. The sustainability profile and its impact on the investment portfolio should also be visible in the monthly reports of the clients.
5. With the introduction of MiFID, every financial product must have an ESG rating. The ESG rating should be implemented in the internal system of the organisation.

1.3 The research question

We established the following research question, in which the answer to this question solves the problem of the organisation:

"Is there a discrepancy between the calculated and chosen sustainability profile of Investment Advice and Discretionary Portfolio Management clients? To what extent does sustainability affect the performance of investment portfolios of Investment Advice and Discretionary Portfolio Management clients?"

1.4 The problem approach

To answer the research question, we established six supporting questions.

1. **a. What does MiFID entail and what is its impact on the organisation?**
   b. What does SFR entail and what is its impact on the organisation?
   We perform a literature study, to gain a better understanding of the regulation. This literature review examines the content of the legislation and what impact it has on the organisation.

2. **How are the current sustainability profiles functioning in the organisation?**
   We conduct desk research to investigate how current sustainability profiles are functioning in the organisation. In addition, we interview employees of the organisation to obtain more information about the sustainability profiles. These interviews are also used to verify the information found during the desk research.

3. **How is the ESG rating of an instrument determined in the organisation?**
Since the instruments in the organisation now have to be rated by the regulation, we interview employees of the organisation. In doing so, we expect to learn how the organisation gives its instruments a ESG rating.

4. **How are the sustainability profiles determined for clients of the organisation?**
To answer the research question, we need to understand how a client's sustainability profile is determined. We analyse the current system used and interview those who have developed this system.

5. **a. What are the discrepancies between the calculated and chosen sustainability profiles in the organisation?**
b. If so, what are the reasons why clients deviate to a different sustainability profile?
In the organisation, data are available about the calculated and chosen sustainability profiles of Investment Advice and Discretionary Portfolio Management clients. We use these data to analyse the discrepancies between the calculated and chosen sustainability profiles from clients. Then, through the data analysis and interviews with employees, we explore why there are differences between the calculated and chosen sustainability profile.

6. **Are the sustainability aspects of investing currently sufficiently emphasised in the organisation?**
We perform a literature study to determine the reasons why clients want or do not want to invest sustainable. We perform another literature study to investigate the impact of sustainability on the return of investment portfolios. This literature study complements an analysis of a financial product of the organisation, where we investigate whether there is a difference between the return of a sustainable and a non-sustainable investment portfolio. In this way, we can determine whether the organisation has currently placed enough emphasis on the impact of sustainability.

An answer to all these supporting questions leads to an answer to the research question. Hereby, we decided to focus on the Investment Advice and Discretionary Portfolio Management clients of the organisation only, given that in these two groups sustainability preferences should be determined.

1.5 The research design

1.5.1 Type of research

The research we conduct is exploratory. Exploratory research is a flexible research method that has a defined purpose (Donald R Cooper, 2014). The organisation wants to know if and why clients choose a different sustainability profile than the calculated sustainability profile. Exploratory research needs to find out if clients choose a different sustainability profile. In addition, the organisation wants more insights into the effect of sustainable investing on investment portfolio returns.

1.5.2 The research subjects

We analyse whether clients choose a different sustainability profile than the one calculated. The organisation and its clients are therefore subject of the research. Since we interview employees, they are also subject of the research. We do not interview clients of the organisation, only data about their sustainability profile and investment portfolio are used for the research.

1.5.3 Explaining the choice of data gathering method

We use the following three data-gathering methods during the research:

1. **Literature study**
   We use a literature study to search for scientific information related to the research topic. The literature study in this research focuses on the regulation of MiFID and SFR. We conduct these literature studies to gain the broadest possible understanding of this regulation. In addition, we conduct a literature study to identify what is currently known about the impact of sustainability on investment portfolio returns.
2. **Interviews – semi-structured**
   We conduct interviews with employees of the organisation to understand how the current sustainability profiles are functioning in the organisation and how the ESG rating of instruments is determined. Furthermore, we verify the findings of the data analysis through interviews with employees.
3. **Data analysis**
   We perform a data analysis to determine the discrepancies between the calculated and chosen sustainability profiles. In addition, we conduct a data analysis on a financial product of the organisation, in order to identify the effect of sustainability on the investment portfolio returns of this financial product.

1.5.4 Limitations of Research Design

There are different limitations of the research design:

- The data used for this research are about clients from the Netherlands.
- We focus on the financial sector and the research is therefore not generalisable to other sectors.
- There is only a limited amount of time available for the research.
- No clients may be interviewed during the research. The reasons found in the research why clients deviate from their calculated sustainability profile can therefore not be confirmed with the clients of the organisation.

1.5.5 The methods and data collection techniques

Table 2 depicts the data collection technique for each research question.

Table 2: Data collection techniques for each research question.

	Question	Method	Deliverables
1a	What does MiFID entail and what is its impact on the organisation?	Literature study and interviews with employees	Explanation of MiFID and its impact on the organisation
1b	What does SFR entail and what is its impact on the organisation?	Literature study and interviews with employees	Explanation of SFR and its impact on the organisation
2	How are the current sustainability profiles functioning in the organisation?	Internal information and interviews with employees	Explanation of the different sustainability profiles in the organisation
3	How is the ESG rating of an instrument determined in the organisation?	Literature study and interviews with employees	Explanation about the way an ESG rating is determined for a product
4	How are the sustainability profiles determined for clients of the organisation?	Internal information and interviews with employees	Explanation on how a sustainability profile is determined for clients of the organisation
5a	What are the discrepancies between the calculated and chosen sustainability profiles in the organisation?	Data analysis	Data analysis about the discrepancies between the calculated and chosen sustainability profiles
5b	If so, what are the reasons why clients deviate to a different sustainability profile?	Internal information and interviews with employees	Explanation about why clients deviate to another sustainability profile
6	Are the sustainability aspects of investing currently sufficiently emphasised in the organisation?	Internal information and interviews with employees	Explanation about the sustainability aspects in the organisation

2 Impact regulation on the organisation

Banks have a crucial function in today's society and the banking sector is highly regulated. The main purpose of bank regulation is to protect consumers, ensure the stability of the financial system and prevent financial crime (IDnow, sd). These regulations should prevent another crisis like the financial crisis of 2008, which has shown how fragile the financial system can be. It showed that actions of the bank affect not only the bank itself, but also other banks, the entire financial system and therefore society as a whole (Rijksoverheid, sd). Laws and regulations are therefore very important in the financial sector and banks should follow these laws and regulations. In this chapter, we introduce the regulation related to the research topic and identify its impact on the organisation.

2.1 MiFID I and II

MiFID stands for “Markets in Financial Instruments Directive”. According to the Financial Services and Markets Authority (FSMA), MiFID is a European regulation that increases transparency in European financial markets. MiFID has been in existence since 2007 and has three aims:

1. Protect investors and the integrity of financial markets.
2. Promote fair, transparent, efficient and integrated financial markets.
3. Further harmonise European stock exchange trading and the investment market (FSMA, sd).

In 2018, MiFID II replaced MiFID. Daniel Liberto (2023) states that “MiFID focused too narrowly on stocks and did not address dealings with firms or products outside the EU, leaving the rules about those to be decided by individual members”. MiFID II broadens the scope of the regulation and aims to protect investors and restore trust in the financial sector, especially after the 2008 financial crisis. If a product is available in the European Union, it is covered by MiFID II (Liberto, 2023).

2.2 SFR

The European Commission states that “sustainable finance refers to the process of taking due account of environmental and social considerations when making investment decisions, leading to increased investment in longer-term and sustainable activities” (European Commission, sd). The following three non-financial components are part of sustainable finance:

1. Environmental – refers to climate change mitigation and adaptation, as well as the environment more broadly and the related risks. What is the impact of the company's activities on the environment?
2. Social – may refer to issues of inequality, inclusiveness, labour relations and investment in human capital and communities. How does the company deal with social aspects such as human rights?
3. Governance – governance ensures that a company uses accurate and transparent accounting methods, pursue integrity and diversity in selecting its leadership, and is accountable to shareholders (Investopedia, 2023).

By including ESG factors in decision-making, financial institutions and its clients are making more conscious choices and better consider long-term sustainability implications. ESG factors can furthermore also help investors identify potential risk and opportunities that may not be captures by traditional financial analysis (Anandv, 2023). However, there have been discussions recently about the shared goals and the role the financial sector can play in the transition to a more sustainable society. To be able to motivate and compare progress on these goals, proposals have been made setting universal standards for reporting on the non-financial impact organisations have. These proposals eventually became laws and regulations. We call these Sustainable Finance Regulations (SFR). SFR forces financial institutions and investors to look at ESG factors. The introduction of SFR in the organisation has led to 13 new regulations (the organisation, personal communication, 2023, September 27). Those relevant to the study are discussed in Section 2.3, Section 2.4, Section 2.5 and Section 2.6.

2.3 SFDR

SFDR stands for "Sustainable Finance Disclosure Regulation" and is in force since 2021. SFDR is a new set of EU regulations aimed at creating more transparency on what can be considered sustainable investments (AFM, sd). It creates rules on disclosure of information related to sustainability in the financial services sector. Furthermore, SFDR should prevent greenwashing. Greenwashing is the phenomenon that companies, and investment firms would give the false impression of their environmental impact. For example, claiming that a financial product is "sustainable" when it is not (Hayes, 2023). The end goal of SFDR is fostering a more sustainable economy. The introduction of SFDR led to some changes in the organisation:

1. **Pre-contractual disclosure**
   Pre-contractual disclosures are informative templates on sustainability that are added to the contract of financial products. This information template is imposed by the regulator. The organisation added specific information for each financial product to this template and added these templates to the contracts (the organisation, personal communication, 2023).

2. **Website disclosure**
   Website disclosures are informative templates on sustainability that are added to the webpage of financial products. This information template is imposed by the regulator. The organisation added specific information for each financial product to this template and added these templates to the website (the organisation, personal communication, 2023).

2.4 The origins of MiFID II ESG

The Paris Climate Agreement was adopted in 2015. Based on this climate agreement, steps should be taken to combat climate change. This agreement is formed by 17 sustainable development goals (SDG). Based on this climate agreement, the European Union set up an expert group. This group delivered an action plan that included a vision of how the EU strategy can promote sustainable finance (European Commission, 2018). Based on that plan, the European Union introduced three building blocks for a sustainable financial framework:

1. Redirecting capital flows towards a more sustainable economy.
2. Making sustainability an integral part of risk management.
3. Encouraging transparency and long-term thinking (European Commission, 2018).

Ten actions were divided over these three building blocks. One of those actions was integrating sustainability in MiFID II: MiFID II ESG originated.

2.5 MiFID II ESG

The adaption of the action plan meant integrating sustainability into MiFID II. This has the following implications for financial institutions:

- There is an EU rating system for all securities and instruments. This means that there are European conditions that a product must meet to receive a certain ESG rating. For financial institutions, this means that the organisation can no longer decide for itself when it calls a security or product sustainable (European Commission, 2018).

- Financial institutions must ask its clients about their sustainability preferences, and the financial institutions are required to follow up on its client's sustainability preferences when providing advice in Investment Advice or Discretionary Portfolio Management (Arendt, 2022).

2.6 Impact MiFID II ESG and SFDR on the organisation

The introduction of MiFID II ESG and SFDR has consequences for the organisation. The consequences relevant to the research are the following:

1. **MiFID II ESG**
    a. As a result of MiFID II ESG, the following question is asked to clients: how sustainable do you want to invest? These sustainability preferences should be added to client's investment profiles. Furthermore, sustainability risks should be factored into product governance, risk management and organisational requirements (Landuyt, 2022).
    b. With the introduction of MiFID, every product in the organisation must now be classified with an ESG rating.
2. **SFDR**
    As a result of SFDR, clients receive more information on the integration of ESG factors in the investment policy for investment products. This includes disclosures on the integration of sustainability risks in pre-contractual information, periodic reports, websites, marketing materials and requirements for financial products, or services that pursue sustainable investments.

3 Important definitions in the organisation

Now that the impact of laws and regulation on the bank is clear, it is good to understand what the investment process in the organisation looks like. For this, it is important that we first explore all the definitions playing a role in the investment process. This chapter addresses these definitions in the organisation.

3.1 Investment concepts in the organisation

In the organisation, there are different types of investment concepts:

1. Self-directed investing clients do so completely independently, without the advice of an investment advisor. The client makes his own decisions and invests via the secure environment of Internet Banking (organisation, internal documentation, 2023). This is also called execution-only.
2. In Investment Advice, an investment advisor from the organisation can advice the client on the composition of his investment portfolio and on his investments. The investment advisor is the client's permanent contact for advice on its investments (organisation, internal documentation, 2023). Where the advisor usually places the orders, in Investment Advice, the client can also place orders itself.
3. In Discretionary Portfolio Management, the client has his assets invested by the organisation. It is a form of investing suitable for high-net-worth clients who do not want to invest themselves and have more than €50,000 available.

We focus on the investment concepts Investment Advice (group two) and Discretionary Portfolio Management (group three) only. For clients in these two groups, a sustainability profile need to be determined. But before determining the sustainability profile, other factors need to be determined: the financial product and the risk profile of the client. In Section 3.2, we discuss the different financial products that the organisation offers and in Section 3.3 we explain the different risk profiles in the organisation.

3.2 Financial products in the organisation

Once the client chooses in which investment concept he wants to operate, Investment Advice or Discretionary Portfolio Management, he must choose the financial product. Table 3 shows the financial products available in the organisation.

Table 3: Financial products of the organisation.

Investment Advice	**Discretionary Portfolio Management**
Comfort ESG Investment Advice	ESG Funds Mandate
Active ESG (plus) Investment Advice	Comfort Income Mandate
Customized Advice	Impact funds Mandate
Private Equity Advice	Multi Manager Mandate
Structured Products Advice	ESG Investment Mandate
	Classic Mandate
	Special Mandate

Investment Advice is available for clients with investable assets from €500,000. The first four financial products of Discretionary Portfolio Management are available for clients with investable assets from €50,000. Financial products five and six are available for clients with investable assets from €500,000. The Special Mandate is available for clients with investable assets from €2,500,000. Furthermore, a variation of the Impact Funds Mandate is the Impact Mandate. Clients can choose the Impact Mandate with investable assets from €2,500,000.

3.3 Risk profiles in the organisation

Once the investment concept and financial product of the client are determined, the risk profile needs to be determined. In the organisation, there are six risk profiles. These risk profiles are varying from very defensive to very offensive. Figure 1 shows these risk profiles.

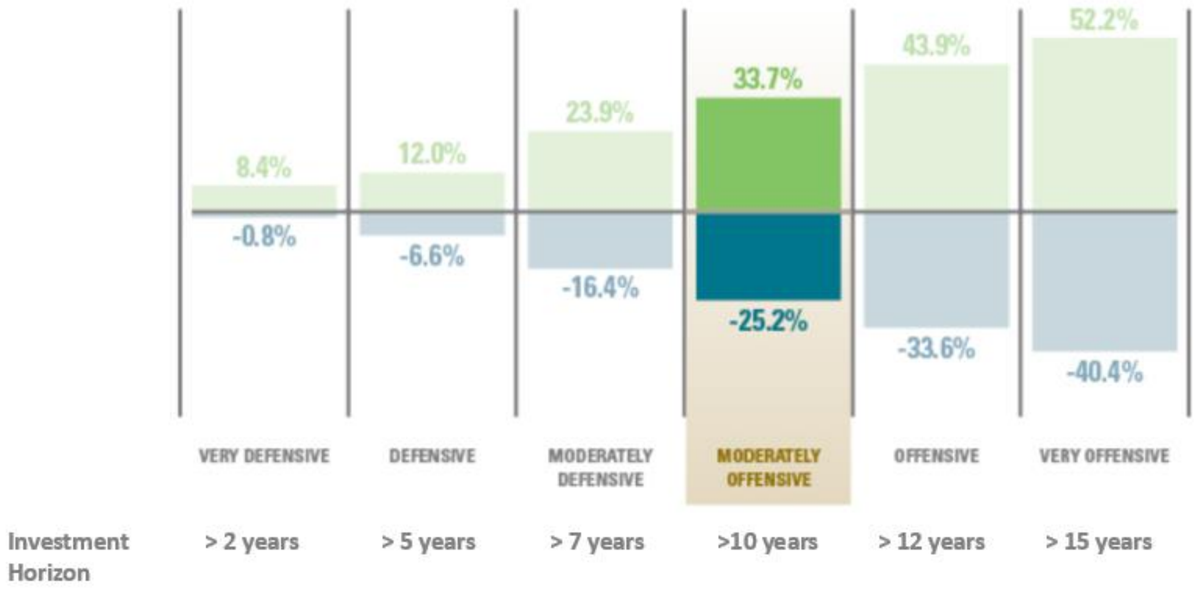


Figure 1: Risk profiles in the organisation; figure derived from the organisation, 2023[1].

Very defensive means you are not willing to take a lot of risk while very offensive means you are willing to take a lot of risk. Figure 1 demonstrates the potentially large profits and losses for the risk profiles over a period of 12 months. It can be seen that the higher the risk profile, the more risk the client runs, and the greater the likelihood of annual gains or losses. The risk profile determines how to put together an investment portfolio. Table 4 shows the asset allocation (AA) for each risk profile. For example, if a client has a very defensive risk profile, 90% of its investment is in fixed income and 10% in liquidities.

Table 4: Asset allocation for each risk profile; table derived from the organisation, 2023.

Asset category	Very defensive	Defensive	Moderately defensive	Moderately offensive	Offensive	Very offensive
Equities	0%	20%	35%	55%	75%	90%
Fixed income	90%	70%	55%	35%	15%	0%
Alternative investments	0%	0%	0%	0%	0%	0%
Liquidities	10%	10%	10%	10%	10%	10%

The organisation uses the asset allocation of Table 4 as a communication tool for the client. With the Asset allocation, the organisation can clearly explain to the client what the investment portfolio might

[1] The percentages in Figure 1 are indicative and serve as examples.

look like based on the different risk profiles. However, the organisation works with the Tactical Asset Allocation (TAA) which is determined by the Global Investment Committee (GIC). The organisation works with the TAA because there are many changes happening every day in the world and financial market and with the TAA, the organisation can react to these changes. The TAA is at least updated once every six weeks according to the changes in the market. The TAA allows advisors to invest in instruments within the asset class limits shown in Table 5.

Table 5: Tactical Asset Allocation (TAA); table derived from the organisation, 2023.

Asset category	Very defensive	Defensive	Moderately defensive	Moderately defensive	Offensive	Very offensive
Equities	0-10%	0-35%	10-55%	20-75%	30-95%	40-100%
Fixed income	40-100%	30-85%	20-70%	10-55%	0-40%	0-25%
Alternative investments	0-10%	0-20%	0-20%	0-30%	0-30%	0-30%
Liquidities	0-60%	0-70%	0-70%	0-70%	0-70%	0-60%

3.4 Sustainability profiles

Once the investment concept, financial product and risk profile are determined for the client, the sustainability profile needs to be determined which is mandatory since the introduction of MiFID II ESG. The organisation created its sustainability profiles based on the Sustainable Finance Disclosure Regulations (SFDR) article numbers. SFDR is part of SFR regulation and determines whether a product may be labelled as "sustainable" or "ESG". Instruments that comply with Article 9 of SFDR are labelled as sustainable and instruments that comply with Article 8 of SFDR are labelled as ESG. Non-sustainable instruments are covered by Article 6 of SFDR (Gruyter, 2021). The requirements for Article 10 have not yet been determined by the European Commission. At the moment, Article 9 is therefore the most sustainable classification a product can receive.

Table 6: Classification instruments based on SFDR (Source: (Gruyter, 2021)).

Article	Classification
Article 6 SFDR	Grey
Article 8 SFDR	Light Green
Article 9 SFDR	Dark Green
Article 10 SFDR	Greenest

The sustainability profiles resulting are depicted in Table 7.

Table 7: Sustainability profiles of the organisation.

Sustainability profile	% of the investment portfolio to be sustainable	Article SFDR
Non-sustainable	0%	Article 6
ESG starter	70%	Article 8
ESG advanced	90%	Article 8
Impact	100%	Article 9
Taxonomy	100%	Article 10

As explained before, it is not clear yet what is meant by taxonomy, despite its inclusion in the regulation (Rödl & Partner, 2023). So the organisation has to ask its clients if they want taxonomy, but the client cannot ultimately choose it (yet). Therefore, there are currently four sustainability profiles in the organisation. Figure 2 depicts these sustainability profiles.

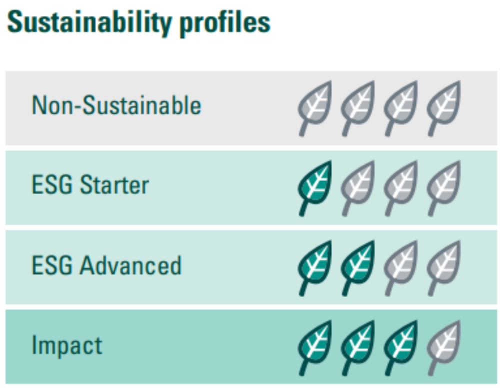


Figure 2: Sustainability profiles; figure derived from the organisation, 2023.

1. **Non-Sustainable sustainability profile**
   For the Non-Sustainable profile, the organisation applies the minimum exclusion criteria. This means it excludes companies on the organisation's controversial weapons list, the sanction list and the list of investment exclusions. If a client chooses this sustainability profile, sustainable investments and/or taxonomy-aligned investments are not taken into account in its investments.
2. **ESG Starter sustainability profile**
   a. For the ESG Starter profile, the organisation applies the minimum exclusion criteria. This means it excludes companies on the organisation's controversial weapons list, the sanction list and the list of investment exclusions. Furthermore, companies must meet the requirements for good governance.
   b. If the client chooses the ESG starter sustainability profile, 70% of its portfolio should consist of investments that meet the criteria of the ESG starter sustainability profile. The other 30% may include non-sustainable investment instruments.
3. **ESG Advanced sustainability profile**
   a. For the ESG Starter profile, the organisation applies the same criteria as in the ESG Starter sustainability profile, however with a number of additional exclusions: this sustainability profile takes into account the majority of the adverse impacts on sustainability factors selected by the organisation.
   b. If the client chooses the ESG Advanced sustainability profile, 90% of its portfolio should consist of investments that meet the criteria of the ESG advanced investment instruments. The other 10% of the portfolio may include non-sustainable investments instruments.
4. **Impact sustainability profile**
   a. For the Impact sustainability profile, the organisation applies the same criteria as in the ESG Advanced sustainability profile. However, on top of all that investment instruments must meet the criteria of a sustainable investment:
      i. The investee company contributes to an environmental or social objective.
      ii. The investee company does not significantly harm any environmental or social objective.
      iii. The investee company follows good governance practices.

b. If the client chooses the Impact sustainability profile, 100% of its portfolio should consist of investments that meet the sustainability criteria of the Impact sustainability profile.

4 ESG rating instruments

As explained in the previous section, the sustainability profile determines the percentage of sustainable investments that should comprise the portfolio. For example, ESG Starter consists of 70% instruments with a rating ESG Starter or higher. In this chapter, we therefore investigate how an ESG rating of an instrument is determined in the organisation.

4.1 How is the ESG rating of instruments determined?

The introduction of MiFID II ESG requires the organisation to give instruments an ESG rating. The organisation does this by initially linking all instruments to the issuing party. For example, a share of Shell is linked to the company Shell. The organisation then gets data on this issuing party from two providers: Sustainalytics and ISS. A third provider, Morningstar, is used for funds. Based on the data received from the providers, the organisation determines what rating a product can receive. The organisation does this using ESG standards. The ESG standards prescribe what an instrument must meet to receive a certain rating. For example, these standards indicate what value the data points must have to fall under the classification "dark green" (see Table 6). Consider the following data points:

1. The company's percentage turnover from the tobacco industry
2. Revenues from thermal coal mining
3. Ownership of companies involved in controversial weapons

The organisation receives the data from the providers on a monthly basis. These data are read into the organisation's analytical environment. The analytical environment collects all the data points needed based on the ESG standards and calculates the ESG rating for each product of the organisation. The analytical environment recalculates this ESG rating every day.

There may sometimes be situations where the organisation disagrees with the rating a product receives. For example, if there are no data available for one data point, the product is classified as no ESG data. No trading in the product is then allowed. In this case, the organisation can overrule this decision. This is carried out through the product approval tool, the PAT. The organisation can then manually adjust the product's calculated ESG rating in the system. These situations are rare, and in most cases, the rating calculated by the analytical environment is retained as the rating of the product (organisation, personal communication, 2023).

4.2 Criticisms on ESG classification

There is a lot of discussion and criticism in the ESG investing space. According to Zack Williams "the lack of standardization of ESG ratings and the subjectivity involved are important concerns that have troubled empirical researchers. Different rating agencies might give the same company different ESG scores based on subjective agency criteria" (Williams, 2022). Prior studies find that ESG rating disagreement seems to mislead even professional investors in their investment decisions and then discourages them from sustainable investment and active engagement in corporate ESG issues (Liu, 2022).

The organisation also notes that there is a lot of concern and criticism on this issue. The organisation points out that an ESG rating always remains partly subjective. It is not a given that a product is covered by a particular classification. However, the organisation has indicated that it is confident with the methodology it applies. In the organisation, there are about 12,000 companies and thus many more instruments and it is not possible to verify whether the data and methodology used lead to the desirable rating for each product. The organisation is confident that if it applies the methodology properly, it gets a reliable ESG rating for its instruments. However, the organisation indicated that in the future new regulations may be introduced that might work with two values for one data point. The worst value is used in the calculation of the ESG rating which avoids a biased ESG rating. This could be a good solution to current concerns about ESG ratings. However, this is something to be explored further in the future and is therefore not yet applicable (the organisation, personal communication, 2023).

5 The importance of sustainability profiles in the organisation

Now that we know what the different investment concepts, financial products, risk profiles and sustainability profiles entail, it is important to know how they are determined. First, in Section 5.1, we investigate how the organisation currently operates. Then, in Section 5.2, we analyse the Investor profile questionnaire (IPQ). This questionnaire determines the investment concept, financial product, risk profile and sustainability profile of a client.

5.1 Method of operation organisation

In this section, we investigate the organisation's methods of operation. During this analysis, it became clear that the organisation uses different operating methods for the investment concept Discretionary Portfolio Management and Investment Advice. In Section 5.1.1, we therefore examine the way of working in Discretionary Portfolio Management. Section 5.1.2 does this for Investment Advice.

5.1.1 Discretionary Portfolio Management

For Discretionary Portfolio Management, the organisation works with model portfolios. A model portfolio is a pre-constructed investment portfolio aimed at a specific level of risk. For each financial product together with a risk profile, a model portfolio is established. Since there are six risk profiles, this means that for each financial product there are six model portfolios. For example, the Multi Manager mandate has six model portfolios. However, with the introduction of the MiFID II ESG regulation, the sustainability profiles must now be included as well. In the organisation, there are four sustainability profiles. When the organisation also has to include the sustainability profiles in the model portfolios, it end up with 24 model portfolios. This leads to very many model portfolios, given the number of financial products in the organisation. The organisation therefore chose to do this in a different way.

The organisation would like to contribute to a sustainable society and become the most sustainable bank in the Netherlands. Therefore, they have chosen that all financial products in Discretionary Portfolio Management have at least sustainability profile ESG Starter (Article 8 of SFDR, see Table 7). In addition, the organisation linked its financial products to a sustainability profile. Figure 3 depicts these matches between the financial product and the sustainability profile. For clients in Discretionary Portfolio Management, this means that they must choose a sustainability profile that matches their financial product. However, these clients may find that the IPQ calculated a sustainability profile that does not match their financial product. Clients then have to choose another sustainability profile that does match with their financial product to continue investing in Discretionary Portfolio Management. The organisation chooses this concept because it has too many combinations of financial products, risk profiles and sustainability profiles. This would lead to an enormous number of model portfolios. So they deliberately chose to link sustainability profiles to financial products and to only offer financial products with at least sustainability profile ESG Starter in Discretionary Portfolio Management (organisation, personal communication, 2023).

Therefore, the organisation uses the following order in its approach:

1. Determine financial product for client.
2. Determine risk profile for client.
3. Determine sustainability profile for client.

Portfolio Management	Sustainability profile	Minimum investment
Comfort Income Mandate	ESG Starters	€ 50,000
Multi Manager Mandate	ESG Starters	€ 50,000
Classic Mandate	ESG Starters	€ 500,000
ESG Fund Mandate	ESG Advanced	€ 50,000
ESG Investment Mandate	ESG Advanced	€ 500,000
Impact Fund Mandate	Impact	€ 50,000
Impact Mandate	Impact	€ 2,500,000
Special Mandates	Various, but at least ESG Starters	€ 2,500,000

Figure 3: Sustainability profiles of financial products Discretionary Portfolio Management; figure derived from the organisation, 2023.

Example

A client would like to be in Income Mandate. This financial product is linked to sustainability profile ESG Starter and therefore an Article 8 financial product in terms of sustainability. The IPQ leads to an Article 9 sustainability profile. However, Article 9 sustainability profile is the impact sustainability profile, and this is linked to the Impact Mandate. However, the client would like to be in Income Mandate. In this case, the mandate, risk profile and the financial feasibility of the client's goal take precedence over the sustainability profile. In this case, the client would like to get income from its investment. This is only possible with the financial product: Income Mandate. Therefore, the client stays in Income Mandate with Article 8 sustainability profile (ESG Starter). As a result, the client is in a lower sustainability profile than what finally came out of the IPQ, but the client's goal of investing is achieved.

Given that the organisation works with model portfolios, clients' investment portfolios are similar to model portfolios in Discretionary Portfolio Management. Two different clients operating with an Income Mandate with risk profile five and sustainability profile ESG Starter, have the same investment portfolio. Thus, an advisor in Discretionary Portfolio Management cannot deviate from the model portfolio.

5.1.2 Investment Advice

In Investment Advice, the way of operating is different. In Investment Advice, the organisation also works with model portfolios, but the client does not have to adhere to those model portfolios. So, clients can also place their own orders that deviate from the model portfolios. The advisor must then point out to the client that the client is deviating from the model portfolio, but the client may proceed with the order. In Investment Advice, the organisation also linked sustainability profiles to financial products in Investment Advice. Figure 4 depicts these matches between the financial product and the sustainability profile. Again, this means that the client must choose a sustainability profile that matches their financial product.

For financial products Comfort ESG Investment advice and Active ESG (plus) Investment Advice, the advisor from the organisation always advice on the basis of ESG starter. For these financial products, it is necessary that the client chooses sustainability profile ESG Starter. However, it can happen that the client does not want to invest sustainable, although their chosen sustainability profile is ESG Starter. In Investment Advice, this is allowed since the client is in charge of his investment portfolio. The advice that the organisation then gives to the client is negative though, as the organisation gives advice according to the ESG Starter profile. However, the client may proceed with the order despite this negative advice. The client portfolio in Investment Advice can therefore also be very different for each client.

Figure 4 shows that for Investment Advice, the sustainability profile Non-Sustainable is allowed for the financial products Customized Advice, Private Equity Advice and Structured Products Advice. Whereas with the other financial products in Investment Advice the advisor has to give advice according to the ESG Starter profile, this is not necessary for these financial products. This is also immediately different from Discretionary Portfolio Management as here the advisor always has to give advice according to the ESG Starter profile (organisation, personal communication, 2023).

Investment advice	Sustainability profile	Minimum investment
Comfort ESG Investment Advice	ESG Starters	€ 500,000
Active ESG Investment Advice (Plus)	ESG Starters	€ 500,000
Customised Advice	Non-Sustainable	€ 2,500,000
Private Equity Advice	Non-Sustainable	€ 5,000,000 or € 3,000,000 under additional conditions
Structured Products Advice	Non-Sustainable	€ 1,000,000

Figure 4: Sustainability profiles of financial products Investment Advice; figure derived from the organisation, 2023.

Example

A client would be in the Comfort ESG Investment Advice. This financial product is linked to sustainability profile ESG Starter and therefore an article 8 financial product in terms of sustainability. However, the client is not concerned with sustainability and prefers not to invest sustainably. Since the client wants to operate with financial product Comfort ESG Investment Advice, the client needs to choose an ESG Starter sustainability profile. The advisor of the client advices the client according to the ESG Starter sustainability profile. But, since the client is in charge of his own investment portfolio, it may invest in in everything it likes and therefore also non-sustainable instruments.

5.2 Investor profile questionnaire (IPQ)

The investment concept, financial product, risk profile and sustainability profile of a client are determined by the organisation's investor profile questionnaire (IPQ). The IPQ is the process by which advisors ask clients a series of questions. The organisation does this initially with new clients who want to start investing in Investment Advice or Discretionary Portfolio Management. However, revision conversations are also held with clients every year to analyse whether these clients still hold a good investment product with a risk profile that suits their preferences. Also during these yearly revision conversations, the organisation uses the IPQ. The IPQ is designed to comply with laws and regulations imposed by The Dutch Authority for the Financial Markets (AFM). Completing the IPQ ultimately leads to the determination of the suitable investment concept, financial product, risk profile and sustainability profile for the client. The steps in the IPQ system are now explained.

5.2.1 Step 1: Concept and financial product suitability to the client

As we explained before, the investment concepts and financial products in the organisation are linked to a sustainability profile. To study the sustainability profile of a client, it is therefore important to first know how the investment concept and financial product are determined. Determining the right investment concept for the client is the first step in the IPQ. The advisor determines, together with the client, which investment concept best suits the client, Execution Only, Investment Advice or Discretionary Portfolio Management. Figure 5 shows this step in the IPQ.

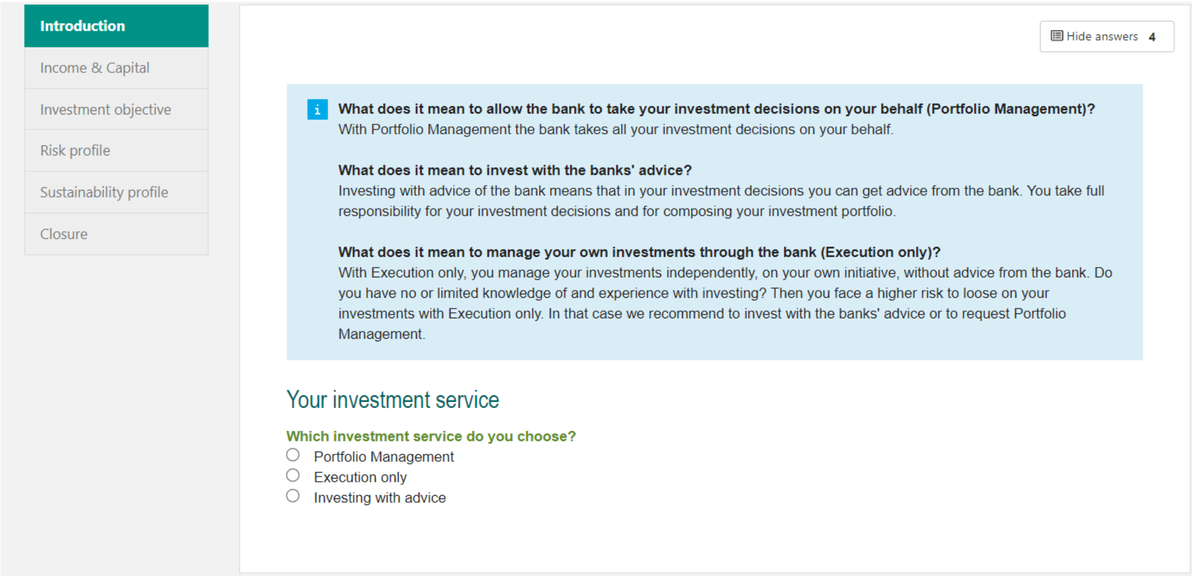


Figure 5: IPQ Choice of Investment Concept; figure derived from IPQ system organisation, 2023.

Figure 6 shows the step of the IPQ system where the client chooses the financial product.

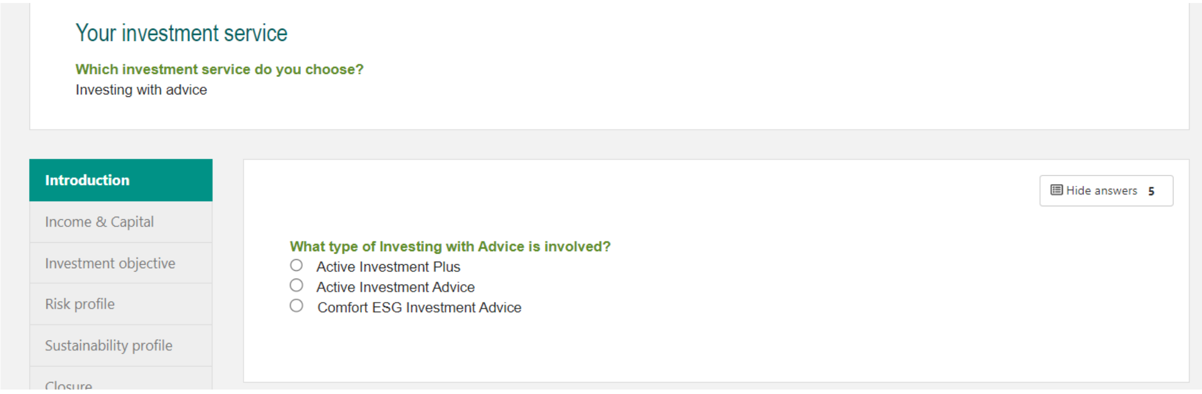


Figure 6: IPQ Choice of Financial Product; figure derived from IPQ system organisation, 2023.

Once the client has chosen an investment concept and financial product, the advisor uses a series of questions to check whether it suits the client. In the organisation, this is called suitability of service. Based on these questions, the advice is determined: either the investment concept and financial product suits the client, or this does not. If the advice is positive, the advisor can proceed to step two. If the advice is negative, the organisation can do the following:

1. Despite the negative advice, the client still wants to invest with this product. However, the organisation should discuss here that the product is in fact not appropriate for the client, this is called duty of care.
2. The organisation can look for another appropriate investment concept and financial product that matches the needs and preferences of the client.

After the investment concept and financial product have been determined, the clients receives a control question. The client hereby confirm that it understand the risks involved. Figure 7 shows the suitability of service and the control question in the IPQ.

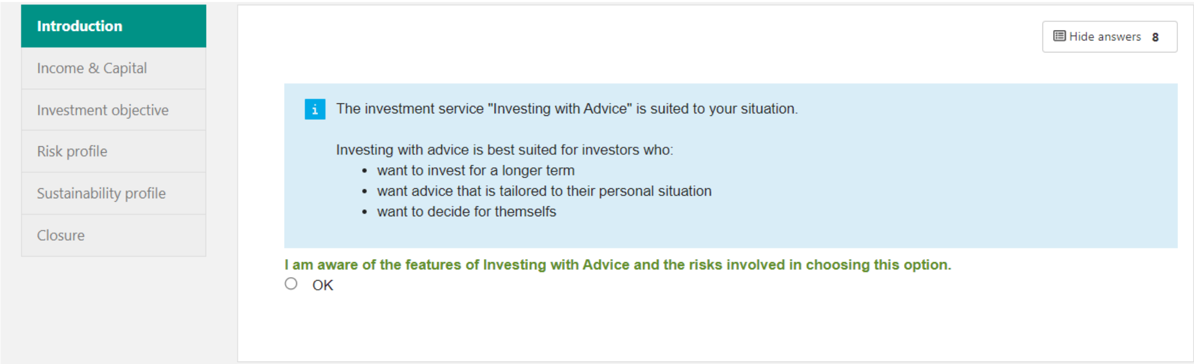


Figure 7: IPQ Suitability of service and control question; figure derived from IPQ system organisation, 2023.

5.2.2 Step 2: Knowledge and experience of the client

The next step in the IPQ is the knowledge and experience test. Based on this test, the client's knowledge and experience with investing is determined. This allows the organisation to assess whether the investment concept and financial product are appropriate for the client. It is legally required that the organisation carries out this knowledge and experience test. Again here, a control question follows which points out to the client that risks are involved, and it is therefore mandatory that the client passes the knowledge and experience test. This test is made separately from the IPQ system. Figure 8 shows the control question in the IPQ.

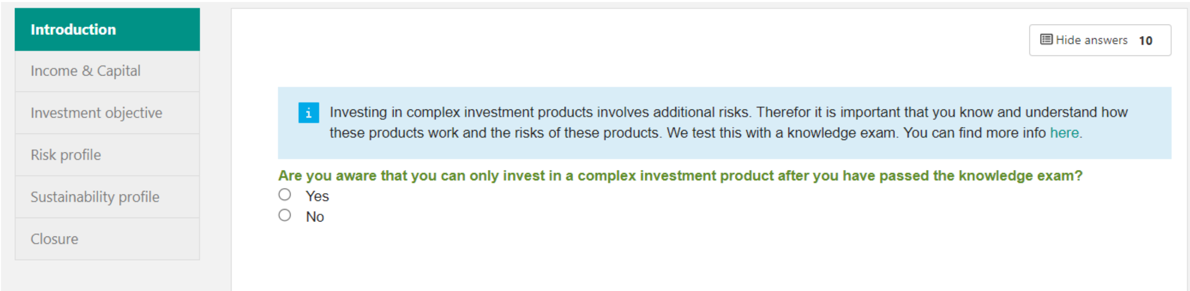


Figure 8: IPQ control question knowledge and experience test; figure derived from IPQ system organisation, 2023.

5.2.3 Step 3: Client's financial situation

In this step, the organisation determines the freely investable assets of the client. First the organisation calculates the freely disposable capital of the client. This is the amount of money with which the client can invest. Figure 9 shows the calculation of the freely disposable capital.

Assets
Liabilities –
Freely disposable capital

Figure 9: Calculation freely disposable capital.

However, if the client expects large withdrawals in the future, the organisation needs to deduct that amount from the freely disposable capital. For example, this could be money for children's studies or money to buy a new house. Furthermore, the advisor asks the client if it expects his capital to change in the next period (next five years). This can be the case when the client expects to sell his company or just started a new job and expects to earn more salary. This can lead to a change in capital of the client and the organisation then incorporates this change in capital. Figure 10 shows this question in the IPQ.

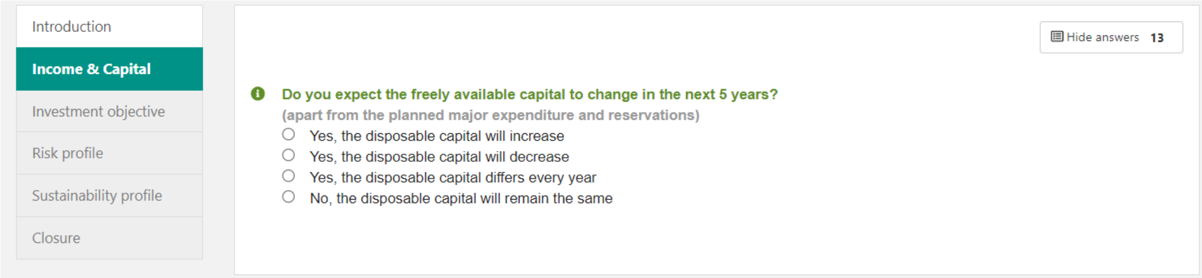


Figure 10: IPQ change in capital; figure derived from IPQ system organisation, 2023.

The freely disposable capital minus the change in capital ultimately leads to the free available capital of the client. However, the organisation does not assume that it can use all the freely available capital. Together with the client, the advisor determines with what portion of the freely available capital the client wants to invest. This is called the freely investable capital.

The next step is the determination of the client's income. The organisation looks at the income side to determine what is bearable for the client. This is also called the suitability to bear losses. It may be the case that a client stops working and therefore no longer receives income. The client then needs part of its capital to live on and can therefore use less money to invest. The first question the organisation therefore asks is whether the client expects its income to change in the next period (5 years).

In addition, the organisation should also check whether the client can cover its expenses with its income, or whether it needs extra capital for this. This leads to the freely available income of the client (see Figure 11). Figure 12 shows one question of the IPQ related to the suitability to bear losses

Income
Expenses -

Freely available income

Figure 11: Calculation freely available income.

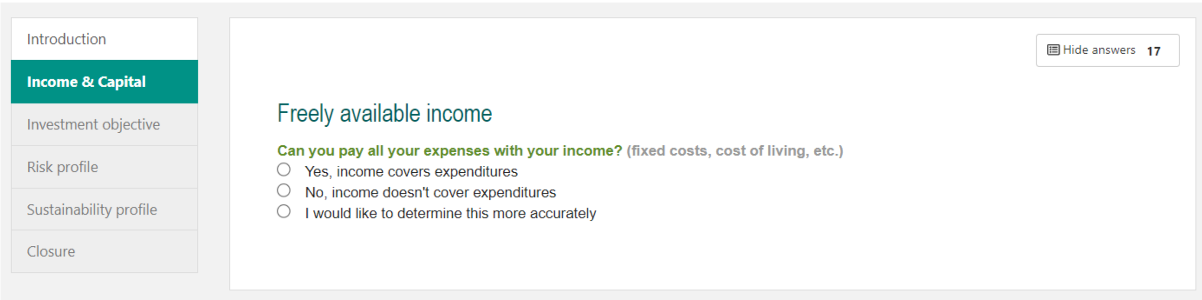


Figure 12: IPQ Suitability to Bear Losses; figure derived from IPQ system organisation, 2023.

By examining client's financial situation, the organisation takes into account future changes in client's capital, income and expenses and thus properly identifies whether the client can make the investment as well without running into financial problems in the future (suitability to bear losses).

5.2.4 Step 4: Risk profile of the client

The client's risk profile is determined next. The risk profile determines how to put together an investment portfolio. A risk profile is also related to returns on an investment portfolio. The higher the risk profile, the more risk the client runs, and the greater the likelihood of annual gains or losses. Since we also want to investigate the impact of sustainability on portfolio returns, it is therefore also important to analyze how a risk profile is determined, since these play a major role in expected investment portfolio returns.

The following factors are important for determining the risk profile of a client:

1. The financial situation of the client. This financial situation was determined in the previous step in the IPQ system.
2. The investment objective which defines what the client's goal is with its investments.
3. The investment horizon which determines how long a client wants to invest.
4. The risk appetite of the client. Based on four statements, the organisation determines how much risk the client wants and how much risk the client can afford to take.

Figure 13 shows the different investment objectives that clients can choose in the IPQ.

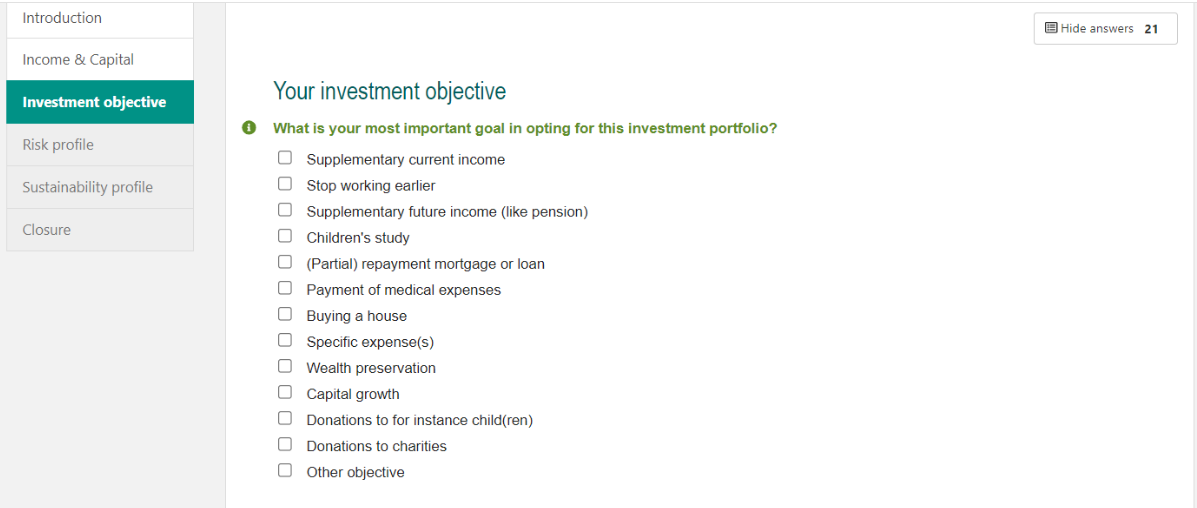


Figure 13: IPQ choices of investment objectives; figure derived from IPQ system organisation, 2023.

Based on the four factors mentioned earlier, a risk profile for the client is calculated. Figure 14 shows this step in the IPQ. In the organisation, there are six risk profiles. These risk profiles are varying from very defensive to very offensive. Very defensive means you are not willing to take a lot of risk while very offensive means you are willing to take a lot of risk.

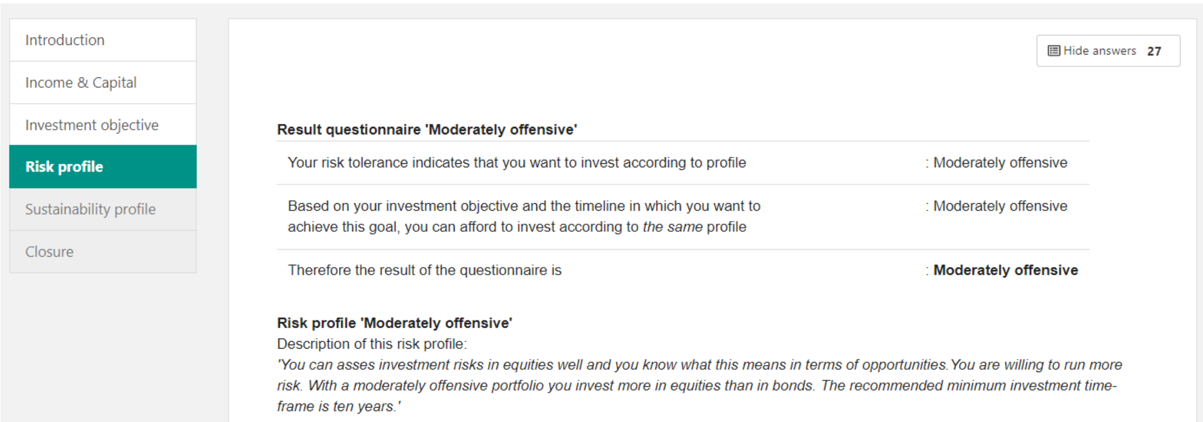


Figure 14: IPQ risk profile; figure derived from IPQ system organisation, 2023.

Once the risk profile of the client is calculated, the advisor discusses the risk profile and the brochure on investor and risk profiles with the client. In this brochure, the different risk profiles and their characteristics are explained. This is again a duty of care for the organisation, it verifies that the client has read the brochure since the brochure gives clients a better understanding of the different risk profiles.

A feasibility analysis follows to give the client an understanding of the different risk profiles and their expected returns. With this feasibility analysis, the client can also understand how his calculated risk profile compares with the other risk profiles. The client can choose to switch risk profiles after these insights. However, this can only be done 1 risk profile up or down. So, when the calculated risk profile of the client is moderately defensive, it can only switch to defensive or moderately offensive. The client's choice for risk profile is indicated in the IPQ system and a control question follows to check that the client knows that the returns on its investment can be different than the ones shown in the feasibility analysis. Figure 15 shows one part of the feasibility analysis of the IPQ.

For the savings account, the organisation uses the legal interest rate, which is the 1-month Euribor. For the risk profiles, the organisation uses past returns depending on the client's chosen investment horizon. So if a client has an investment horizon of 10 years, the average return of the past 10 years per risk profile is taken to calculate the expected returns. In addition, the organisation is required by law to take inflation into account. Hence, we see that in a bad market, the client's money on the savings accounts becomes worth less due to inflation.

Risk profile	Good market	Expected market	Bad market	Capital objective achievement probability	
				nominal	with price inflation
Savings account	€ 1.012.942	€ 889.623	€ 783.332	31%	2%
Very defensive	€ 1.076.707	€ 974.408	€ 857.043	74%	13%
Defensive	€ 1.248.247	€ 1.030.035	€ 844.682	81%	30%
Moderately defensive	€ 1.476.135	€ 1.070.755	€ 769.912	79%	41%
Moderately offensive	€ 1.814.534	€ 1.117.714	€ 668.105	76%	48%
Offensive	€ 2.233.101	€ 1.148.318	€ 573.715	73%	51%
Very offensive	€ 2.556.319	€ 1.142.997	€ 495.954	68%	51%

Figure 15: IPQ Feasibility Analysis part one; figure derived from IPQ system organisation, 2023.

Figure 16 shows the second part of the feasibility analysis. It is a legal requirement to show the client a feasibility analysis. This is stipulated by European Securities and Market Authority (ESMA). The feasibility analysis in this research are just informative. For each client, this analysis looks different (with other amounts and percentages), depending on investment horizon, investment goal, risk profile and freely investable capital. The feasibility analysis is an additional check to see if the client's risk profile, investment horizon and investment goal align.

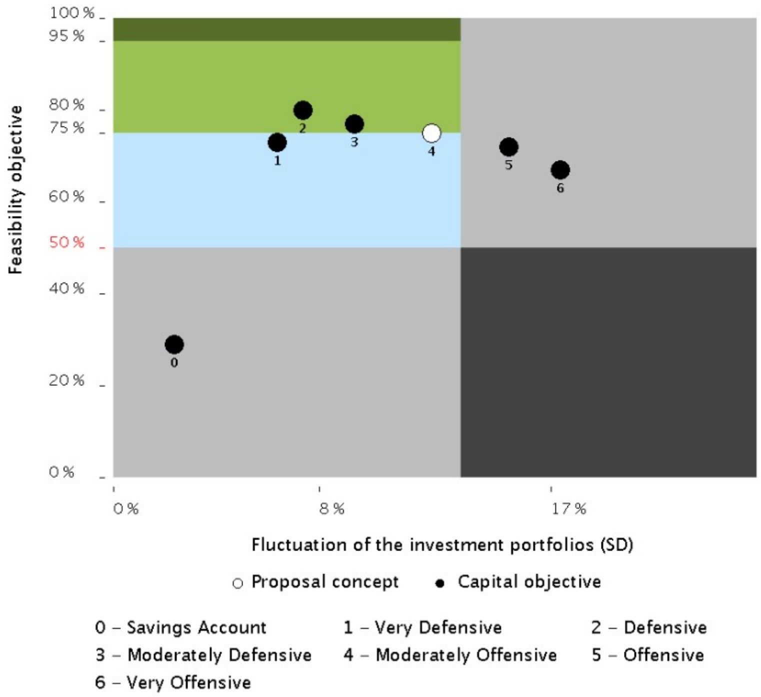


Figure 16: IPQ Feasibility analysis part two; figure derived from IPQ system organisation, 2023.

5.2.5 Step 5: Sustainability profile of the client

This research examines the discrepancies between the calculated and chosen sustainability profiles of clients of the organisation. It is therefore important to know how a sustainability profile of a client is calculated and chosen. The last step in the IPQ system is the determination of the sustainability profile of the client. The organisation first asks the client whether he wants to invest sustainably. If a client indicates it does not want to invest sustainably, the organisation no longer asks any other sustainability questions, and the client is given a calculated sustainability profile no ESG preference. However, if a client does indicate that it wants to invest sustainably, three other questions follow, in which the organisation asks to what extent a client wants to take into account one or more of the following three categories regarding sustainability in its investments:

1. Investments that take adverse impacts on sustainability factors into account.
2. Sustainable investments.
3. Taxonomy-aligned investments.

The organisation has chosen to be a sustainable organisation and because of this, the financial products of Investment Advice (except customized advice, private equity advice and structured products advice) and Discretionary Portfolio Management all have at least sustainability profile ESG Starter or higher. So a client must choose a sustainability profile that is at least ESG Starter (except for financial products customized advice, private equity advice and structured products advice). If a client does not agree to this, then the organisation cannot invest for the client. If the client does agree to this, a number of questions for each category are used to determine the client's sustainability profile. This results in the calculated sustainability profile of the client. A summary follows that tells what the client's sustainability profile is and whether it matches the financial product the customer is in. Figure 17 shows this step in the IPQ. If the client decides to choose a different sustainability profile than the calculated sustainability profile, the advisor must incorporate the client's choice into the IPQ system.

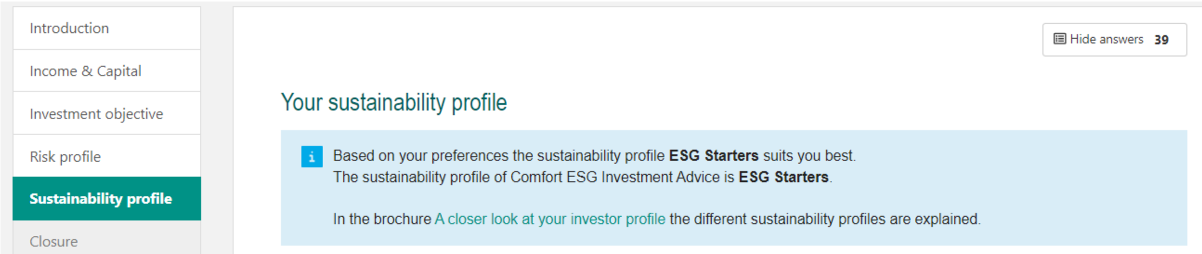


Figure 17: IPQ Sustainability profile; figure derived from IPQ system organisation, 2023.

5.2.6 Step 6: Closure IPQ system

This is the last step in the IPQ to check once again the response of the client on its risk profile. The advisor discusses once again the feasibility analysis with the client. This is a very last check to make sure the client is aware of its decisions and the consequences attached to them. Figure 18 shows this closure step in the IPQ.

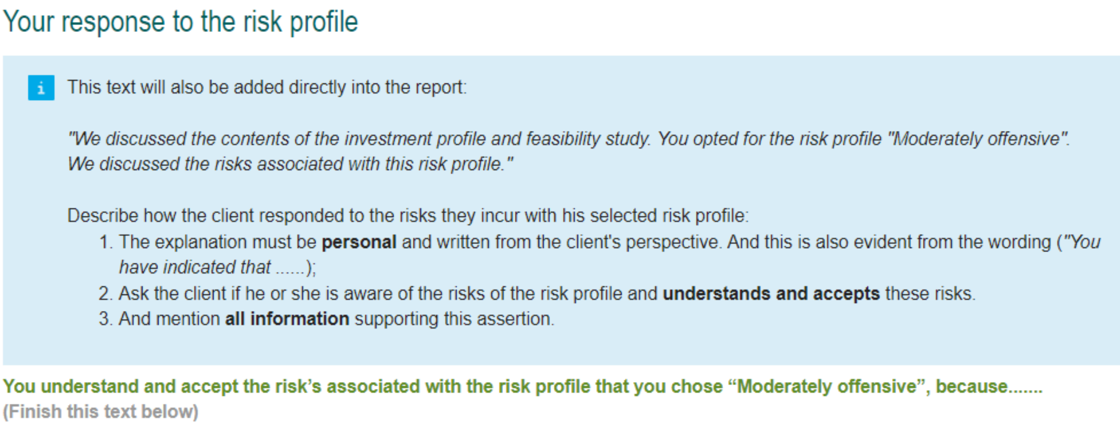


Figure 18: IPQ response risk profile; figure derived from IPQ system organisation, 2023.

6 Discrepancy between calculated and chosen sustainability profile

In this chapter, we perform a data analysis to determine whether there are discrepancies between the calculated and chosen sustainability profiles of clients. The analysis we perform in this research is a quantitative data analysis. The data available in the organisation are used to identify relationships between the calculated and chosen sustainability profile of clients.

6.1 Data collection

For this analysis, the data of Investment Advice clients and Discretionary Portfolio Management clients have been requested. These data were already available in the organisation and could therefore simply be accessed. For each client, the following data are available:

1. **Business client number**
   Each client of the organisation has a Business client number. This is an internal number that the organisation uses for its clients and this number is not known to client.
2. **Depot number**
   Each client's depot has a number, this is called the depot number.
3. **Financial product code**
   The financial product code indicates which financial product the client has chosen.
4. **Opening date of the depot**
   For each client depot, is it recorded when this depot was opened.
5. **Answers to the sustainability questions**
   For each client, the organisation records what the client's answers were to the five sustainability questions in the IPQ.
6. **Calculated sustainability profile**
   The calculated sustainability profile of the client resulting from the IPQ is established.
7. **Chosen sustainability profile**
   The chosen sustainability profile of the client is established. Table 8 recalls the sustainability profile in the organisation.

Table 8: Sustainability profile in the organisation.

Sustainability profile
No Data
No ESG Preference
Non-Sustainable
ESG Starter
ESG-Advanced
Sustainable Impact
EU Taxonomy

6.2 Inclusion and Exclusion criteria

6.2.1 Inclusion criteria

Inclusion criteria explains the characteristics that clients of the organisation must have in order to be included in the data analysis (Nikolopoulou, 2023). For this data analysis, data of clients can only be taken into account when the client is in Investment Advice or Discretionary Portfolio Management. Figure 19 shows the percentages of Investment Advice and Discretionary Portfolio Management clients. Furthermore, the second diagram shows the asset under management amount of Investment Advice and Discretionary Portfolio Management clients.[2]

Figure 19: Investment Advice clients versus Discretionary Portfolio Management clients.

6.2.2 Exclusion criteria

Exclusion criteria explains the characteristics that clients of the organisation must have in order to be excluded from the data analysis. During the analysis of the data set, it became clear that not for each client data about the sustainability profile is available. The data of these clients are indicated with the label "No Data". The label "No Data" occurs in the data set because the yearly revision conversation (recall Section 5.2) with the client has not taken place and no sustainability profile is yet determined for these clients. As nothing is known about these clients and their sustainability choices and profile, these clients cannot be included in the data analysis. The clients with sustainability profile code "No Data" are therefore removed from the data set. Figure 20 depicts the percentage of clients for both Investment Advice and Discretionary Portfolio Management from which no data are available.

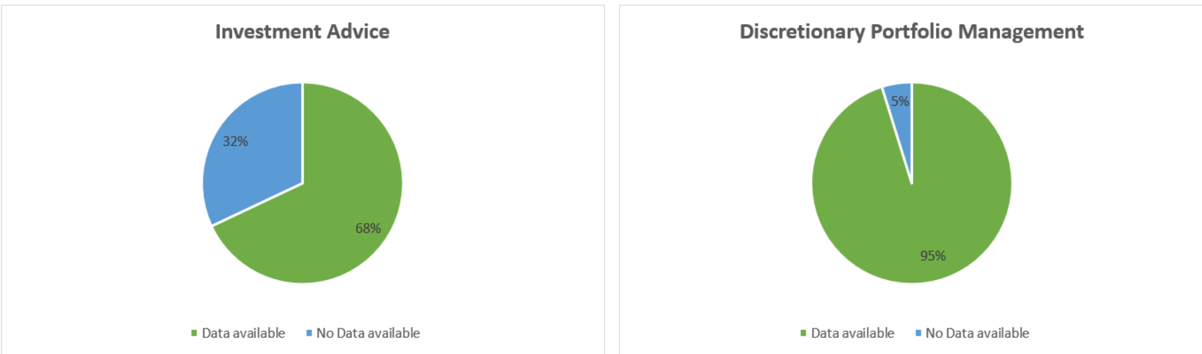


Figure 20: Percentage of clients in the organisation with label "No Data".

This two diagrams show that the amount of "No Data" is bigger in Investment Advice than in Discretionary Portfolio Management. This shows that more revision conversations need to take place with clients in Investment Advice to discuss these sustainability preferences. In Discretionary Portfolio Management, more of these conversations have already taken place this year.

6.3 Data analysis method

The data used for this research are processed in Excel. To analyse whether there are discrepancies between the chosen and calculated sustainability profiles of clients, we assigned numbers to the sustainability profiles to simplify the analysis.

[2] Due to confidentiality, the number of clients and asset under management amount may not be mentioned in this research

Table 9: Sustainability profiles numbered.

Sustainability profile	**Number**
No ESG Preference	0
Non-Sustainable	1
ESG Starter	2
ESG-Advanced	3
Sustainable Impact	4
EU Taxonomy	5

Based on these numbers, we established the discrepancies between the calculated and chosen sustainability profiles. The following ifs statement was used here:

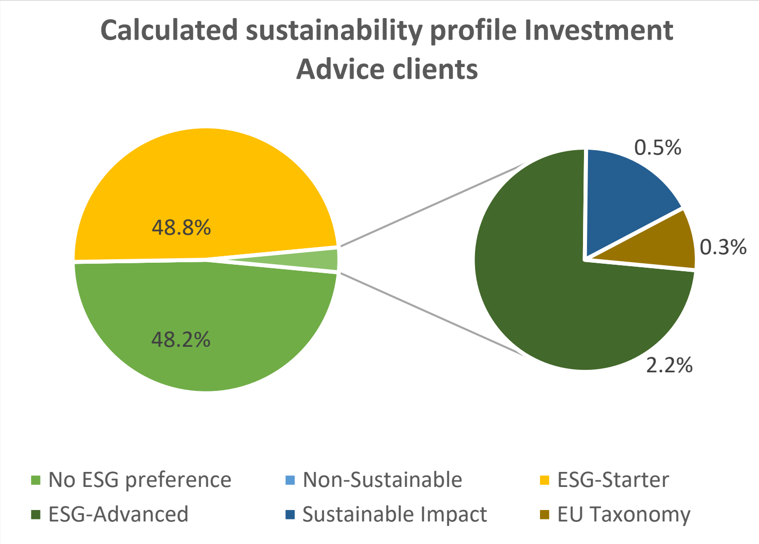
= IFS (number calculated sustainability profile = number chosen sustainability profile; Chosen sustainability profile equal to calculated sustainability profile; number calculated sustainability profile < number chosen sustainability profile; Chosen sustainability profile greener than calculated sustainability profile; number calculated sustainability profile > number chosen sustainability profile; Chosen sustainability profile less green than calculated sustainability profile)

These discrepancies are grouped into three groups:

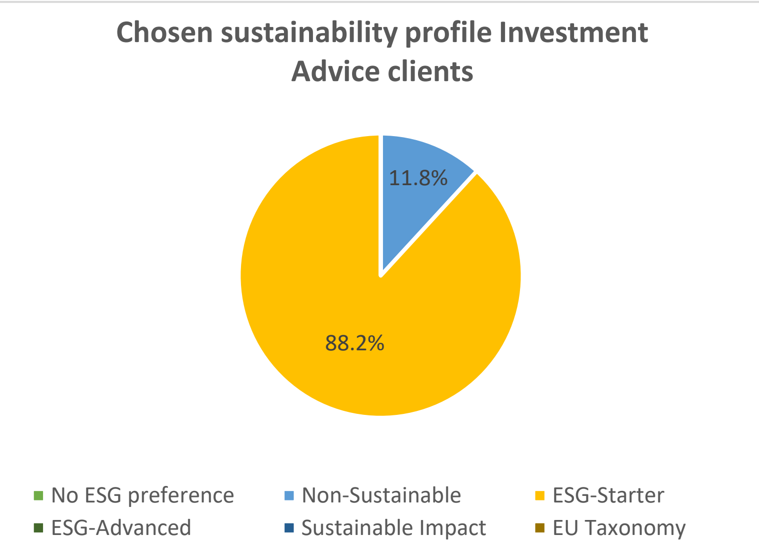
1. **Chosen sustainability profile equal to calculated sustainability profile**
   As the title suggests, this group included clients who have a chosen sustainability profile equal to the calculated sustainability profile. For example, a client's calculated and chosen sustainability profile is ESG Starter, then this client falls under group "chosen sustainability profile equal to calculated sustainability profile".
2. **Chosen sustainability profile greener than calculated sustainability profile**
   This group includes clients who choose a sustainability profile greener than the calculated sustainability profile. For example if the calculated sustainability profile of the client is ESG Starter, but the client chose to be in ESG-Advanced, then the client falls under group "chosen sustainability profile greener than calculated sustainability profile".
3. **Chosen sustainability profile less green than calculated sustainability profile**
   This group includes clients who choose a sustainability profile less green than the calculated sustainability profile. For example if the calculated sustainability profile of the client is ESG Starter, but the client chose to be in Non-Sustainable, then the client falls under group "chosen sustainability profile less green than calculated sustainability profile".

6.3.1 Investment Advice

For Investment Advice, the data set is analysed. First, we determined the number of clients per sustainability profile for both the calculated and chosen sustainability profile. Figure 21 shows this analysis.



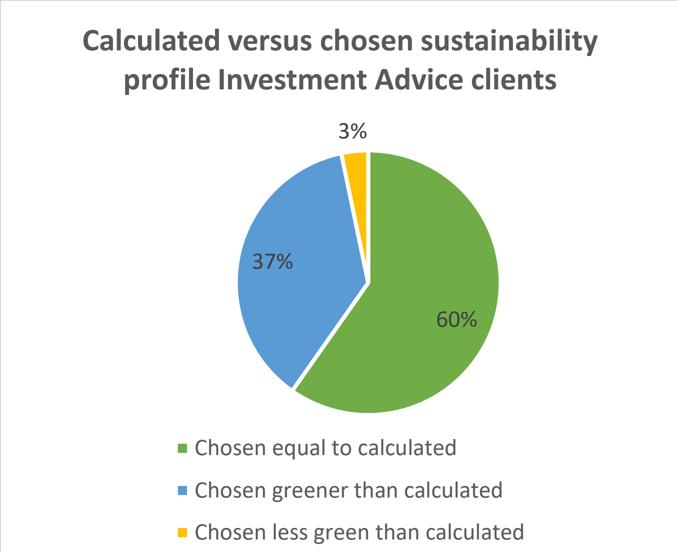
This diagram shows that 48,8% of the clients have sustainability profile ESG Starter and 48,2% of the clients has sustainability profile No ESG preference. Zero percent of the clients has a calculated sustainability profile Non-Sustainable.



This diagram shows that 88,2% of the clients has chosen sustainability profile ESG Starter. 11,8% of the clients has sustainability profile Non-Sustainable. This figure also shows that the percentage of Taxonomy as chosen sustainability profile is 0%. As explained earlier (Section 3.4), a client cannot choose Taxonomy yet, so this is in line with the organisation's policy.

Figure 21: Calculated and chosen sustainability profile Investment Advice clients.

Next, we determined the discrepancies between the calculated and chosen sustainability profiles of Investment Advice clients. Here, we use the data analysis method described at the beginning of Section 6.3. Figure 22 show these discrepancies.



This diagram shows that 60% of the clients choose a sustainability profile equal to their calculated sustainability profile, 37% of the clients choose a sustainability profile greener than the calculated sustainability profile and only 3% of the client chooses a sustainability profile less green than the calculated sustainability profile.

Figure 22: Chosen versus calculated sustainability profiles Investment Advice.

Figure 22 shows that there are discrepancies between the calculated and chosen sustainability profiles of Investment Advice clients. We performed an analysis on some specific financial product in Investment Advice, to better understand why there are discrepancies. Here, we chose financial products with different sustainability profiles, in order to get the broadest possible understanding of the choices clients make.

Active ESG (plus) Investment Advice

To perform this analysis, we reduced the data set to just the data of clients with financial product Active ESG (plus) Investment Advice. For clients with this financial product, we established what their calculated and chosen sustainability profiles are. Figure 23 shows this analysis.

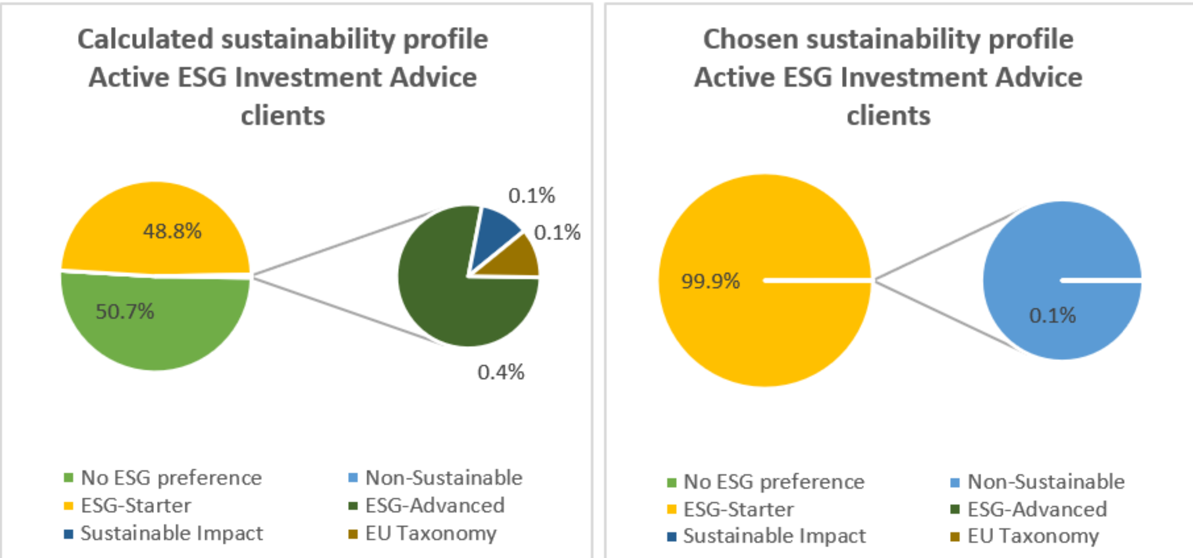


Figure 23: Calculated and chosen sustainability profile Active ESG (plus) Investment Advice clients.

What stands out about this chart is that the chosen sustainability profile of clients is in 99.9% of cases ESG Starter. Only 0.1%[3] of the clients have a chosen sustainability profile Non-Sustainable. The Active ESG (plus) Investment Advice of the organisation is linked to the ESG Starter profile. A client of the organisation can therefore only be in the financial product Active ESG (plus) Investment Advice when his chosen sustainability profile is ESG Starter. It is therefore remarkable that 0.1% of the clients have a chosen sustainability profile Non-Sustainable.

Private Equity Advice

To perform this analysis, we reduced the data set to just the data of clients with financial product Private Equity Advice. For clients with this financial product, we established what their calculated and chosen sustainability profiles are. Figure 24 shows this analysis.

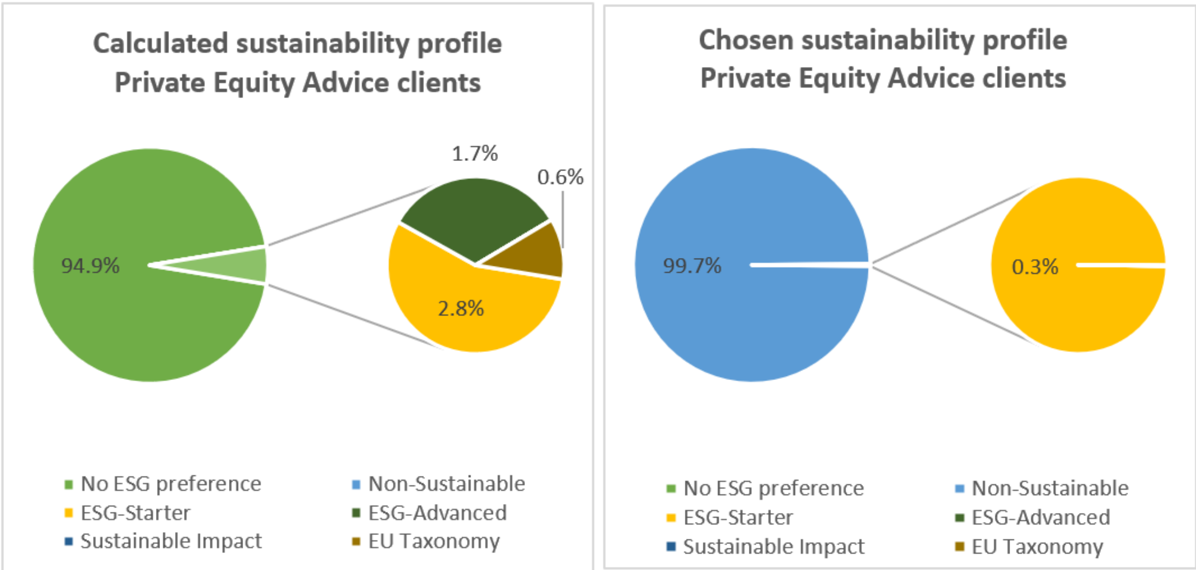


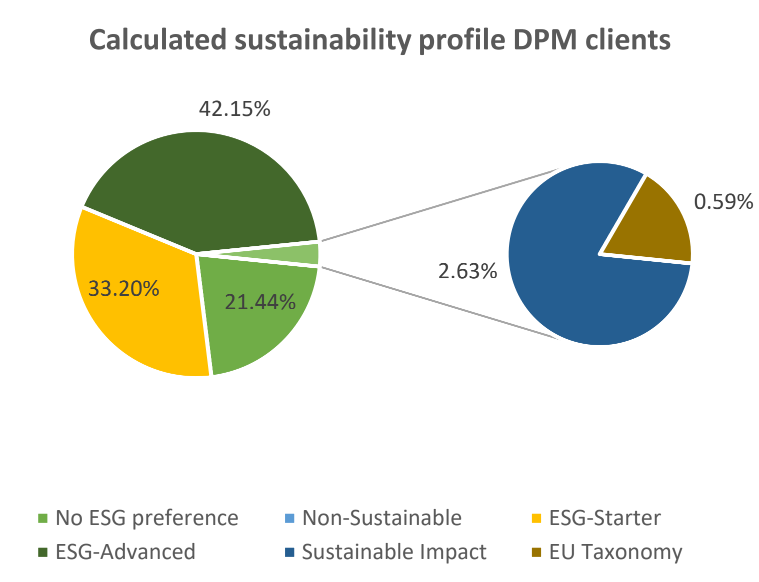
Figure 24: Calculated and chosen sustainability profile Private Equity Advice clients.

Also here, is stands out that the chosen sustainability profile of client is in 99.7% of cases Non-Sustainable. Only 0.3% of the clients chooses sustainability profile ESG Starter. Financial product Private Equity Advice in the organisation is always linked to the Non-Sustainable sustainability profile. It is therefore remarkable that 0,3% of the clients have a chosen sustainability profile ESG Starter.

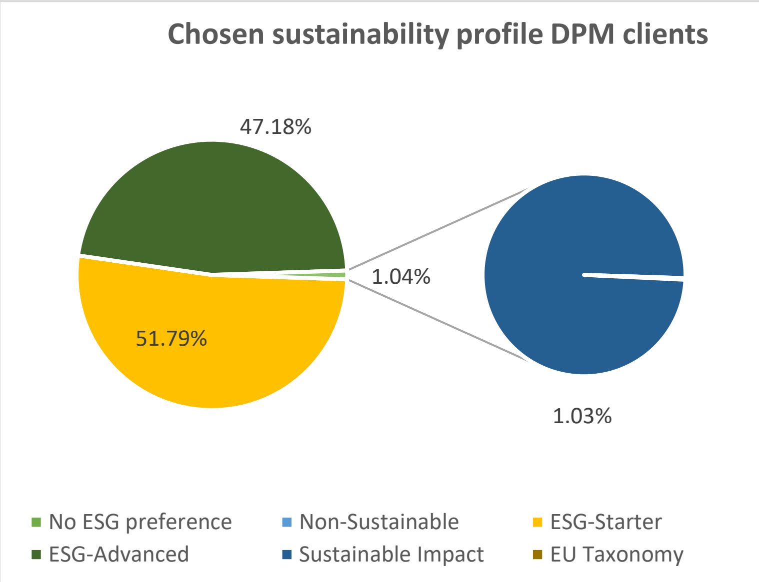
6.3.2 Discretionary Portfolio Management

For Discretionary Portfolio Management, the data set is analysed. First, we determined the number of clients per sustainability profile for both the calculated and chosen sustainability profile. Figure 25 shows this.

[3] Due to confidentiality issues, the number of clients may not be mentioned in the research, hence percentages are used. Although 0.1% may seem small, these clients still represent a substantial portion of the organization's client base. This also applies to percentages further mentioned in the data analysis.



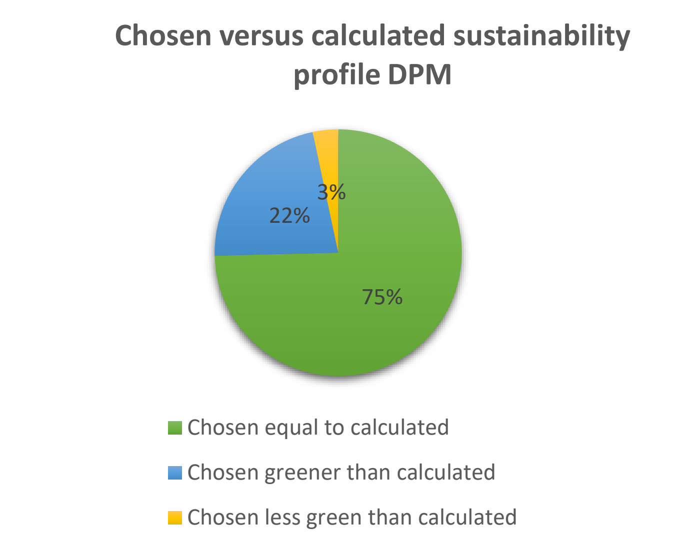
This diagram shows that 42.15% of the Discretionary Portfolio Management clients have a calculated sustainability profile ESG-Advanced. Only 0.59% of the clients chooses sustainability profile Taxonomy.



This diagram shows that 51.79% of the Discretionary Portfolio Management clients have a chosen sustainability profile ESG Starter. Sustainability profile Sustainable Impact is only chosen by 1.0% of the clients. 0.01% of the clients have a chosen sustainability profile Non-Sustainable.

Figure 25: Calculated and chosen sustainability profile Discretionary Portfolio Management clients.

Next, we determined the discrepancies between the calculated and chosen sustainability profiles of Discretionary Portfolio Management clients. Again here, we use the data analysis method described at the beginning of Section 6.3.



This diagram shows that in 75% of the clients choose a sustainability profile equal to their calculated sustainability profile resulting from the IPQ. 22% of the clients choose a sustainability profile greener than the calculated sustainability profile and only 3% of the client choose a sustainability profile less green than the calculated sustainability profile.

Figure 26: Chosen versus calculated sustainability profiles Discretionary Portfolio Management.

Figure 26 shows that there are discrepancies between the calculated and chosen sustainability profiles of Discretionary Portfolio Management clients. To better understand why there are discrepancies, we performed an analysis on some specific financial products in Discretionary Portfolio Management.

Income mandate

To perform this analysis, we reduced the data set to just the data of clients with financial product Income mandate. For clients with this financial product, we established what their calculated and chosen sustainability profiles are. Figure 27 shows this analysis.

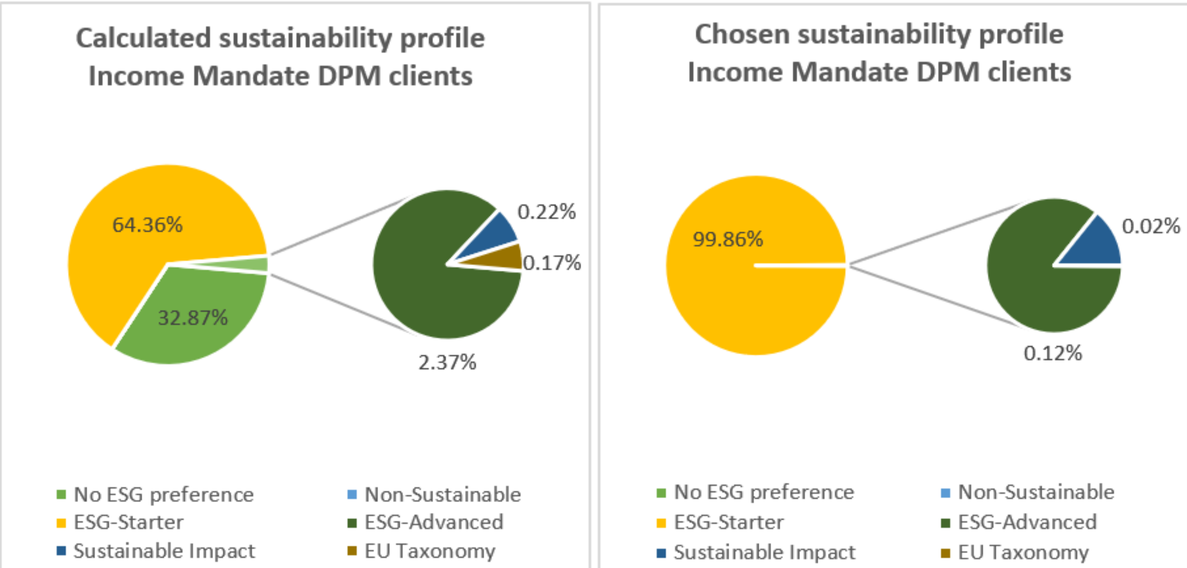


Figure 27: Calculated and chosen sustainability profile Income Mandate Discretionary Portfolio Management clients.

What stands out about this chart is that the chosen sustainability profile of clients is in 99.86% of the cases ESG Starter. However, 0.14% of the clients chooses a sustainability profile which deviates from sustainability profile ESG Starter. This is remarkable since financial product Income Mandate is linked to sustainability ESG Starter.

Impact mandate

Also here, we reduced the data set to just the data of clients with financial product Impact Mandate. For clients with this financial product, we established what their calculated and chosen sustainability profiles are. Figure 28 shows this analysis.

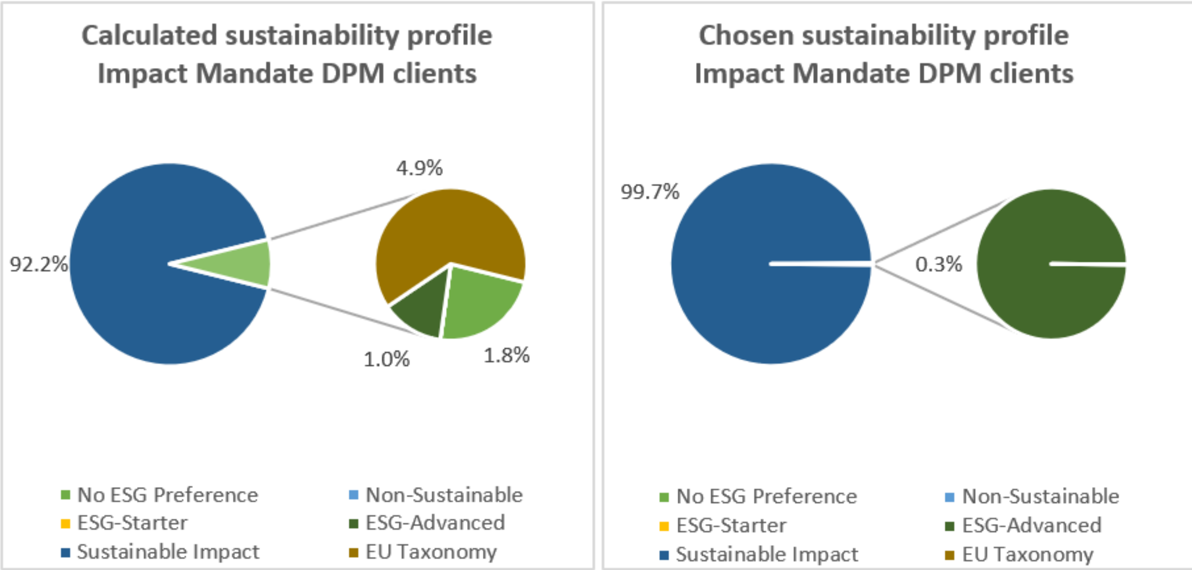


Figure 28: Calculated and chosen sustainability profile Impact Mandate Discretionary Portfolio Management clients.

Again here, it stands out that the chosen sustainability profile of clients is in 99.7% of the cases Sustainable Impact. However, 0.3% of the clients chooses a sustainability profile ESG-Advanced. The financial product Impact Mandate is linked to sustainability profile Sustainable Impact. It is therefore remarkable that 0.3% of the clients choose a different sustainability profile than Sustainable Impact.

6.3.3 Investment Advice versus Discretionary Portfolio Management

No ESG preference

As Figure 29 shows, 48.2% of the clients have a calculated sustainability profile No ESG preference in Investment Advice, whereas this percentage is 21.4% for Discretionary Portfolio Management. A client gets a calculated sustainability profile no ESG preference if it indicates in the IPQ that it does not want to invest sustainably.

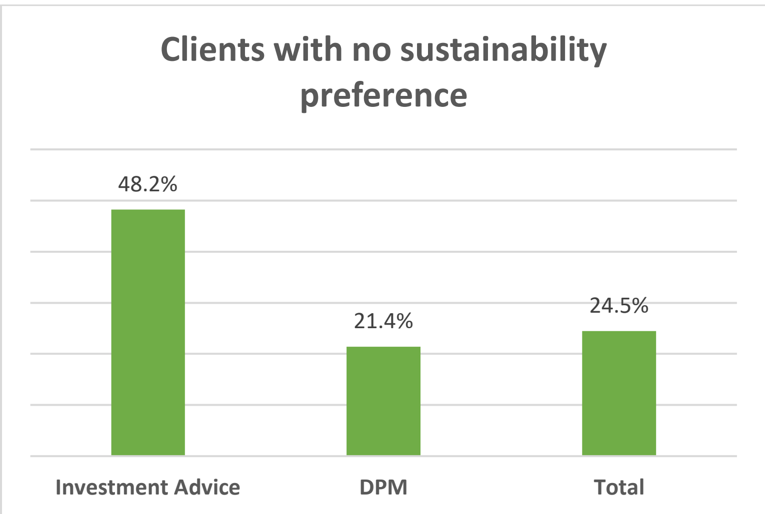


Figure 29: Clients with calculated sustainability profile no ESG preference.

To understand the choices of Investment Advice clients and Discretionary Portfolio Management clients better who have a calculated sustainability profile No ESG preference, we analysed those clients. This analysis leads to Figure 30.

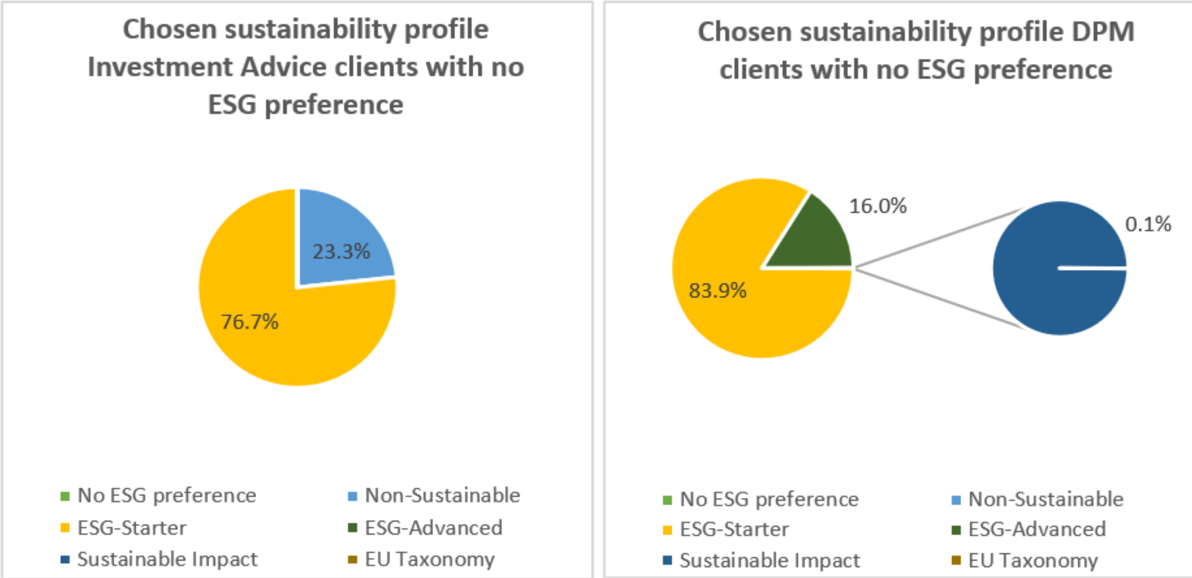


Figure 30: Chosen sustainability profile of Investment Advice clients and Discretionary Portfolio Management clients with no ESG preference.

Number of clients and asset under management value

In the organisation, there are data available about the number of clients and the assets under management amounts. Table 10 and Table 11 show these data from 2018 till 2023[4].

Table 10: Percentage difference number of clients.

Percentage difference number of clients between consecutive years				
2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023
2.07%	27.96%	-0.43%	-0.20%	0.88%

Table 11: Percentage difference assets under management amounts.

Percentage difference assets under management amount between consecutive years				
2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023
-0.97%	14.89%	0.03%	1.80%	0.72%

Looking at these date, we can conclude two things:

1. The number of clients increased in 2023 compared to 2022. Looking at previous years, we see a big increase in clients in 2020 and then a decrease in the number of clients in years 2021 and 2022.
2. The assets under management amount fluctuates. The high percentage of 2019 to 2020 can be explained due to the large number of new clients in 2020. In the following years, we see a positive percentage difference in the assets under management amount.

[4] Due to confidentiality, the number of clients and asset under management amount may not be mentioned in this research.

Based on these data, there is no clear indication that the organisation has lost clients after 2022, although the organisation has chosen to offer only sustainable financial products.

6.4 Reasons of discrepancy between calculated and chosen sustainability profile

The data analysis shows that at Investment Advice, 40% of the clients have a chosen sustainability profile that is different from the calculated sustainability profile. For Discretionary Portfolio Management, this percentage is 25%. We studied the results of the data analysis and discussed it with employees of the organisation. This clarified the reasons for the discrepancies between clients' calculated and chosen sustainability profiles. These reasons are discussed now.

6.4.1 Client would like to keep its current financial product

As we explained before, the financial products in the organisation are linked to a sustainability profile (see Figure 3 and Figure 4). The sustainability preferences were not requested from clients until after the regulation was introduced in August 2022. However, clients were already investing with a financial product in the organisation before the introduction of the regulation. A client may then be given a calculated sustainability profile that does not match the current financial product the client has. Two situations may then arise:

1. **Client's calculated sustainability profile is greener than chosen sustainability profile**
   It occurs that clients have calculated sustainability profiles that are greener than the sustainability profiles linked to their preferred financial products. This becomes clear from the analysis of the Income mandate in Discretionary Portfolio Management. In these cases, clients must select sustainability profiles that are less sustainable than the calculated ones to maintain their investment in the Income Mandate. This leads to discrepancies between the calculated and chosen sustainability profiles of clients.
2. **Client's calculated sustainability profile is less green than chosen sustainability profile**
   It also happens that the calculated sustainability profiles of clients are less green than the sustainability profiles linked to their preferred financial product. This becomes clear from the analysis of the Impact Mandate. In these cases, the clients must select sustainability profiles that are more sustainable than the calculated ones to maintain their investment in the Impact Mandate. This leads to discrepancies between the calculated and chosen sustainability profiles of clients.

In both situations, the clients end up choosing different sustainability profiles than the calculated sustainability profiles, as this allows them to continue investing with their current financial products. This therefore leads to discrepancies.

6.4.2 Client wants to choose another financial product

When looking at the data, we can conclude that clients switch to another sustainability profile because it matches with a financial product the clients want to choose. In doing so, we analyse the following two findings:

1. Clients who are new to the bank after the introduction of the regulation switch to a different sustainability profile because this sustainability profile matches the financial product the client wants. Here, the clients who have no ESG preference were filtered out first, as these always have to switch sustainability profiles.
   a. In Investment Advice, the percentage of clients that switch sustainability profile is 1.17%.
   b. In Discretionary Portfolio Management, the percentage of clients that switch sustainability profile is 6.09%.

2. With the introduction of the regulation, a new financial product has been introduced in the organisation. This is financial product Impact Fund Mandate. Compared to the Impact Mandate, the Impact Fund Mandate is already accessible to clients with freely available capital of €50,000, whereas this amount if €2,500,000 for the Impact Mandate. This has made the Impact Funds Mandate the first financial product in the organisation that is Article 9 in terms of sustainability and has an entry value of €50,000. We see that 0.79% of existing clients who were already investing with the organisation before the introduction of the regulation make a switch to this new financial product and therefore also switch sustainability profile.

So, this analysis shows that there are clients who switch sustainability profile because they want to choose another financial product than the one linked to the calculated sustainability profile. Furthermore, the analysis of the new financial product Impact Funds Mandate shows that clients do switch financial products and therefore sustainability profiles when that financial product matches the preferences of the client better. However, we also see that this percentage is still small (0.79%).

6.4.3 Clients have no ESG preference

As the analysis shows, there are in total 24.5% of the clients who have no ESG preference. However, the organisation has opted for a policy of only sustainable financial products. It is therefore not possible for a client to have a chosen sustainability profile No ESG preference. In this case, there are two choices:

1. The client decides he does not want to invest sustainably and therefore the client decides to stop investing at the organisation.
2. The client would like to continue investing with the organisation and therefore he does choose a sustainability profile. In this case, there is always a discrepancy between a client's calculated and chosen sustainability profiles.

As the data analysis shows, there is no clear indication that the organisation has lost clients after 2022, although the organisation has chosen to offer only sustainable financial products. The discrepancies are formed by clients who stay with the organisation and therefore choose profiles that are sustainable, while their calculated sustainability profiles are No ESG preference. This therefore causes discrepancies between the calculated and chosen sustainability profiles of clients.

6.4.4 The client does not understand the IPQ's questions

What cannot be deduced directly from the data but what is apparent from client satisfaction surveys and interviews with employees of the organisation, is that not all clients understand the sustainability questions in the IPQ. The following two findings from the customer satisfaction survey are relevant to the study:

1. 68% of the respondents indicated that they found the report understandable. This report contains all aspects of the IPQ process and some additional explanation.
2. 57% of the clients indicated that the sustainability aspects of investing are discussed in the report.

Clients receive the report afterwards after having the revision conversation with the advisor. The report serves as a kind of summary and the client can thus check whether everything is correct following the conversation with the advisor. The client satisfaction survey however makes clear that 32% of the clients does not understand the report and therefore the IPQ questionnaire. The moment the client does not understand the questions in the IPQ, it results in the client giving wrong answers to the questions. This, in turn, results in a calculated sustainability profile for the client that does not match the sustainability preferences of the client.

Furthermore, 43% of the clients indicate that the sustainability aspects of investing are not discussed in the report and therefore also not during the conversation with the advisor. If the sustainability aspects are not explained to the client, the client may find it more difficult to answer the sustainability questions because it does not fully understand what the sustainability questions entail. This again leads to a miscalculated sustainability profile.

Action
In the future, to make sure that clients do understand the sustainability questions correctly, we recommend the organisation to incorporate a control question into the IPQ. Thus, each client must be asked if he understands the sustainability questions before the client can answer the question. These control questions ensure that clients can give more appropriate answers to the questions according to their sustainability preferences. Such a control question also makes it clear to the advisor whether the client understands the sustainability questions. If not, the advisor also knows that it needs to explain the sustainability questions in the IPQ. This allows the clients to better complete the questionnaire in the future, so that it results in calculated sustainability profiles that matches the clients preferences.

6.5 Procedural flaws

While studying the data analysis, we also noticed that some clients have chosen sustainability profiles that do not match with the financial products the clients have. Some findings are explained now:

1. 0.01% of the clients have a sustainability profile Non-Sustainable in Discretionary Portfolio Management. As explained in Section 5.1.1, the organisation decided that all its financial products in Discretionary Portfolio Management are at least sustainability profile ESG Starter. It is therefore not possible for a client to choose sustainability profile Non-Sustainable.
2. 0.29% of the clients in Private Equity Advice have a chosen sustainability profile ESG Starter. To invest with this financial product, it is necessary to have a chosen sustainability profile Non-Sustainable. It is therefore not possible for a client to choose sustainability profile ESG Starter.
3. 0.26% of the clients in the Impact Mandate have a chosen sustainability profile ESG-Advanced. To invest with this financial product, it is necessary to have a chosen sustainability Sustainable Impact. It is therefore not possible for a client to choose sustainability profile ESG-Advanced.

Table 12 shows the percentage of clients who have chosen sustainability profiles which do not match with the determined sustainability profiles of their financial products.

Table 12: Deviations sustainability profile Investment Advice and Discretionary Portfolio Management.

ESG Funds Mandate	ESG Investment Mandate	Classic Mandate	Multi Manager Mandate	Comfort Income Mandate	Impact Fund Mandate
0.29%	0.24%	0.19%	0.35%	0.14%	0.26%
Customized Advice	**Active ESG Investment Advice**	**Private Equity Advice**			
96.0%	0.11%	0.29%			

Figure 31 shows the "wrong" deviations clients make from their calculated sustainability profiles. Wrong here means clients choose sustainability profiles that do not match the sustainability profiles of their financial products. Figure 31 shows that 81% of the clients choose a sustainability profile that is the same as the calculated sustainability profile. 13% of the clients choose a "wrong" sustainability profile while their calculated sustainability profile is no ESG preference. 4% of the clients chooses a "wrong" sustainability profile that is one profile lower than their calculated one and 2% that is two lower than its calculated sustainability profile.

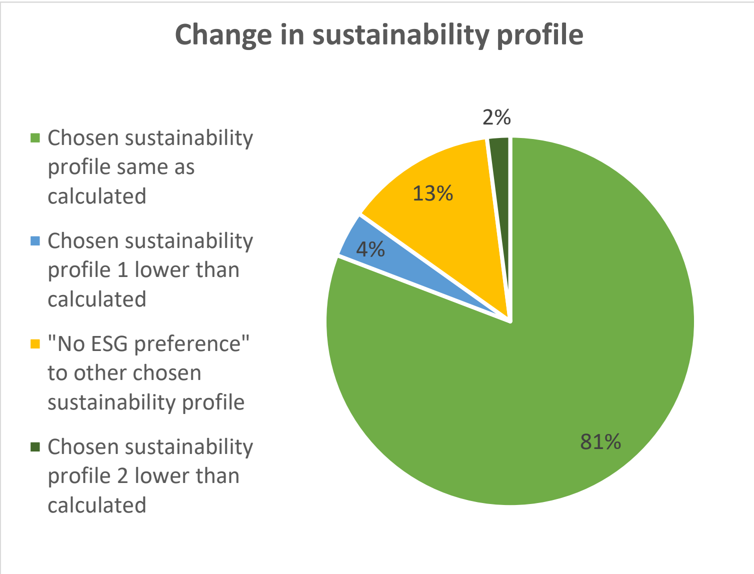


Figure 31: Deviation from calculated sustainability profile.

We analysed why these deviations occurs, and it turns out that there are two main reasons for these errors:

1. **Incorrect completion of IPQ**
   It appears that these deviations arise from the procedure that advisors of the organisation currently maintain. The deviations occur with clients who have been investing with the bank for some time and thus already have a certain financial product. With the introduction of the regulation, sustainability preferences need to be established among these clients as well. So, the advisors go into the revision conversation with the client and the IPQ is completed again. This results in a calculated sustainability profile of the client. This calculated sustainability profile does not always match with the determined sustainability profile of the clients current financial product. However, the advisor does draft contracts based on this calculated sustainability profile of the client (and thus also takes the calculated sustainability profile as the chosen sustainability profile). After this, the advisor archives the IPQ in the organisation's

system. As the clients stays with its current financial product, it does not sign the contracts. But the IPQ is already archived in the system and the wrong sustainability profile is linked to the client and his financial product. As Figure 31 shows, this is the case in 81%.

2. **Human error by advisor**
The other 19% of the cases can be attributed to a human error by the advisor who fills in the wrong chosen sustainability profile for the client.

Action
It is important to ensure that such errors do not occur in the organisation in the future. This is because these errors all have to be adjusted manually in the system by the corresponding advisor, which is very time-consuming. It also causes major errors in the organisation's system. Therefore, we made the following two recommendations for the organisation:

1. In the future, to prevent the advisor from already archiving the IPQ in the system, it should be ensured that the advisor can only do this after the client has signed the contract. This makes sure that the client's financial product matches the sustainability profile set out in the client's contract. In addition, there should be an independent audit on a quarterly basis to see whether there are still errors in the system. If so, they can be fixed in the short term. This ensures that the organisation's internal system is always compliant with its policy and the regulation.
2. In addition, more attention should be paid to these mistakes in the IPQ training of advisors, and the impact of these mistakes should be shown to the advisors. The advisors thus re-learn why it is important for them to work carefully. In this way, such mistakes can be avoided in the future.

6.6 Customized advice

An aspect that really stood out during the data analysis was the data of financial product Customized Advice. Therefore, we now take a closer look at this financial product. The calculated and chosen sustainability profiles of these clients are established and shown in Figure 32.

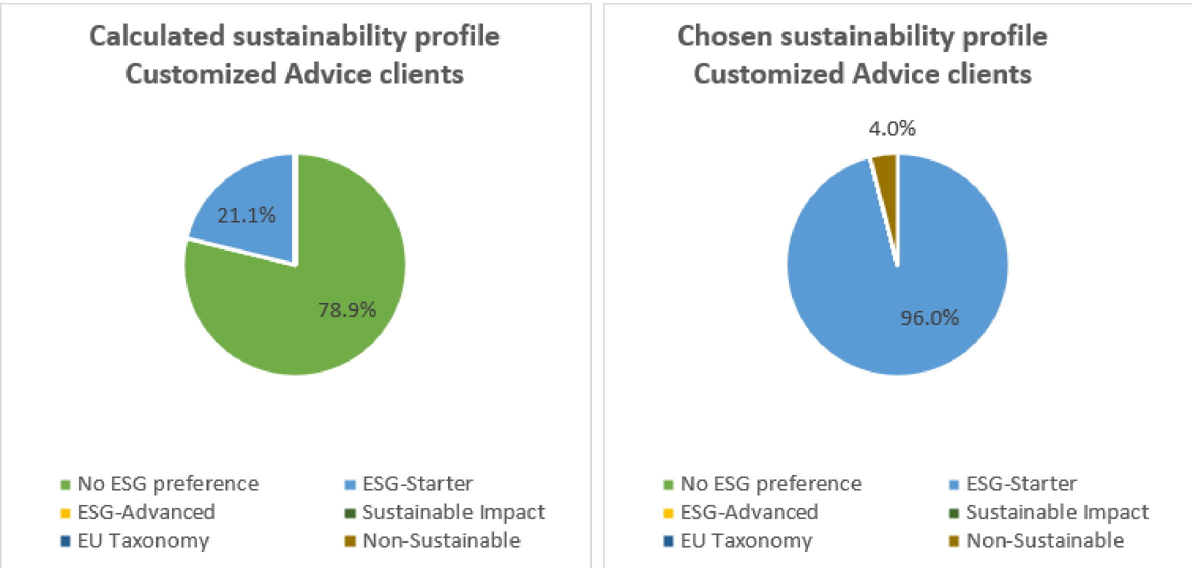


Figure 32: Calculated and chosen sustainability profile Customized Advice clients.

This analysis shows that 96% of the clients chooses sustainability profile ESG Starter, whereas 4% of the clients chooses sustainability profile Non-Sustainable. This is remarkable since sustainability profile Non-Sustainable is linked to this financial product and only 4% of the clients choose this sustainability profile.

But what is even more remarkable to Customized Advice is that it is the only financial product in Investment Advice that has a profile that is non-sustainable[5]. The organisation has decided that all the financial products it offers are sustainable. It is therefore interesting to see that there is a non-sustainable product among them. Furthermore, the data show that 96% of the clients already choose a profile that is sustainable. Why should the organisation not cease offering Customized Advice? Table 13 shows a desk research we performed to analyse the pros and cons for the organisation and its clients when it stops with Customized Advice.

Table 13: Pros and cons Customized Advice.

Organisation	
Pros	**Cons**
Since Customized Advice is very similar to Active ESG (plus) Investment Advice, the organisation can easily merge (and stop with Customized Advice) these two financial products without losing clients. The clients who are currently in Customized Advice can switch to Active ESG (plus) Investment Advice.	Less income for the organisation because Customized Advice is a more expensive financial product than Active ESG (plus) Investment Advice.
Stopping Customized Advice ensures that all the organisations products are now truly sustainable. This contributes to the organisations sustainability objective.	There is currently one team dedicated to Customized Advice. Discontinuing this product results in these people having to be distributed among the other investment teams and perhaps some employees resigning from the organisation.
Clients	
Pros	**Cons**
The investable assets clients must have in Active ESG (plus) Investment Advice is lower than in Customized Advice (€500,000 versus €2,500,000).	In Active ESG (plus) Investment Advice, the client can perform slightly fewer trading activities than in Customised Advice.
Client has 20 basis points (1 basis point = 0,20%) less costs with financial product Active ESG (plus) Investment Advice than with Customize Advice.	

The organisation once set up Customized Advice to comply with regulation in terms of passing on its costs. However, it has never been a business model from which the organisation has earned much, as the client base in Customized Advice has in fact shrunk rather than grown since the years of its inception. Keeping this in mind, and weighing the pros and cons, we recommend to the organisation to quit with financial product Customized Advice. The bank's sustainability goal is to become the most sustainable bank in the Netherlands. Offering financial products that are non-sustainable does not contribute to this objective. Furthermore, data reveal that clients in Customized Advice already choose a sustainable profile. Quitting financial product Customized Advice would then not affect

[5] Financial products Private Equity Advice and Structured Products Advice also have sustainability profile Non-Sustainable but are very different from the other financial products in Investment Advice and therefore we do not include these products in the comparison.

these clients much, as they can go to financial product Active ESG (plus) Investment Advice. This financial product has sustainability profile ESG Starter, and this matches well with the chosen sustainability profile of the clients and the goal of the organisation.

7 Impact sustainability on performance financial products

We can now conclude that there are discrepancies between clients' calculated and chosen sustainability profiles. But does the sustainability profile affect client investment portfolio performance? And if it affects clients' investment portfolios and their returns, is the organisation paying enough attention to this?

A client survey was conducted in the organisation in 2023 to investigate how customers value sustainability. Table 14 shows some quotes of clients during this survey.

Table 14: Clients survey 2023 about sustainability; client survey from organisation, 2023.

Positive statements
Sustainability factors in Investment Advice.
Sustainability is important for current and future generations.
I think it is important that the organisation offers sustainable investment products.
Promote transparency when classifying companies on sustainability.
Negative statements
Money is money and not sustainable.
Excessive focus on sustainability lowers my returns.
The organisation must ensure returns on my investments.
Sustainability is not necessary for me. What matters to me are my returns.

This survey shows a division among clients of the organisation. Some clients value sustainability highly and consider it as important. Other clients value the return on their investments most and think sustainability lowers that return. To investigate whether sustainability has an effect on returns, we conduct a literature study. Furthermore, we analyse the performance of a financial product in the organisation to investigate whether this performance is affected by sustainability.

7.1 Literature study effects of sustainability on returns

We consulted literature to find out why investors do or do not want to invest sustainably. The reasons why clients want to invest sustainably are now discussed. We validated the reasons found in the literature with the organisation and supplemented those where necessary.

Reasons to invest sustainably

1. **Sustainable impact**
   A study of the Dutch Authority for the Financial Markets (AFM) shows that almost half of the investors, 49%, who invest sustainably do so to make a positive sustainable impact. Impact through sustainable investments means that improvements in sustainability are generated by these investments, which would not otherwise take place. These investors want their investments to contribute to positive sustainable changes in the world (AFM, 2022).
2. **Future generations**
   Another frequently mentioned reason for wanting to invest sustainably is for children and future generations. Investors say they want to achieve returns with a good feeling. By thinking about sustainability when investing, investors feel they are doing the right thing and a contributing to a better planet for future generations (internal communication, organisation, 2023).
3. **Higher returns**
   A study revealed that 20% of sustainable investors believe they achieve higher returns with sustainable investments compared to non-sustainable investments. These investors believe

that sustainable companies achieve better financial returns compared to non-sustainable companies (AFM, 2022).

4. **Hedging future risks**
   Another reason for investors to invest sustainably was hedging future risks. The idea is that sustainable companies are more future proof as the unsustainable ones. (internal communication, organisation, 2023).
5. **Tax benefits**
   The organisation indicated that tax benefits are also one of the reasons for investing sustainably for some investors. There is an exemption for green investments and green savings in the Netherlands, although this is not extensively communicated by the organisation. This means that the investor only has to pay tax if the value of these investments and savings exceeds a certain amount (Belastingdienst, 2023).
6. **Ethical reasons**
   Some investors additionally states that they do not want to invest in companies with a link to child labour or the arms industry. These investors want to invest in companies that are in line with their standards and values. This is also known as value-alignment (AFM, 2022).

So we found a number of reasons in literature why investors like to invest sustainably. However, there are also reasons why investors are currently reluctant to invest sustainably. We discuss these reasons now.

Reasons to not invest sustainably

1. **Lower returns**
   The most frequently reason for not investing sustainably is the (expected) return. Investors are afraid that opting for sustainability would come at the expense of their returns. A study from Investment Manager Schroders shows that more than half of a thousand Dutch respondents are concerned about the financial results of sustainable investing. This keeps these people from increasing the share of sustainable investments in their portfolio (FD, 2023).
2. **Social impact**
   More than half of Dutch investors say they question the social impact of sustainable investing (FD, 2023).
3. **Difficult/time-consuming**
   Some clients of the organisation indicate that they do not invest sustainably because they find it difficult and time-consuming. Investing, depending on the strategy an investor adopts, can take a lot of time. It may therefore happen that an investor wants to invest sustainably but does not have the time to include sustainability in its investment strategy (internal communication, organisation, 2023).
4. **Not much known about it yet**
   Investors who do not currently invest sustainably indicate that they would do so should more be known about the impact of sustainably investing on social change (FD, 2023). So the fact that not much is currently clear about sustainable investing is a reason for these investors not to do it yet.

Again, we found a number of reasons in literature why investors do not want to invest sustainably. However, the most frequently cited reason is the lower expected return. Investors say they do not want their returns to be lower because of sustainability (Schram, 2022). Another survey shows that sustainability is only one investment criterion for most investors. 'Return is still the most important to them’ (Rotteveel, 2022).

The main reasons given by investors for why sustainable investing would yield lower returns are:

1. **Exclusion hinders good portfolio diversification**
   By investing sustainably, unsustainable companies are (partly) excluded. This results in investors having a smaller equity universe at their disposal which in turn leads to lower expected returns. The theory behind this is that excluding companies or sectors increases tracking error and risk relative to a benchmark as the investable universe shrinks (Hale, 2019).
2. **Sustainable initiatives cost money**
   Another argument against sustainable investing was advanced by economist Milton Friedman. According to Friedman, sustainable companies have to invest in sustainable initiatives which are at the expense of their profits. This results in these companies having less value compared to unsustainable companies (Friedman, 1969).
3. **High costs**
   Many investors think that sustainable investing is higher in costs than non-sustainable investing (Hale, 2019).
4. **Lower valuations for unsustainable companies**
   a. Excluding unsustainable companies cause their share price to fall. This is harmful to the unsustainable company for two reasons. The company's shareholders are not satisfied with this development, as they see their shares fall in value. The second reasons has to do with the issuance of shares of this unsustainable company. As the value of the shares are lower, the company has to issue more shares to achieve amount X. This too is harmful to the business (Betlem & Kleinbussink, 2015).
   b. A counterargument is that excluding these non-sustainable companies may reduce the share price in the short term, but it "undervalues" the company, and this in fact makes the shares attractive to investors who are not interested in sustainability. So this shows that sustainable investing can also ensure that investors who are not interested in sustainability can benefit from other investors who invest sustainable and thus exclude the unsustainable companies (Betlem & Kleinbussink, 2015).

We now analyse what the literature says about the return on sustainable investments. For this, we used the database Scopus. Here, two different key strings were used. We read the abstracts of all articles to determine which studies were relevant to the research. Here, we chose to use only the general articles on sustainable investing and its returns, and not those focused on a particular market or country. These relevant studies can be seen in Table 15.

Table 15: Literature study on sustainable investing.

Keywords	Study	Opinion
("Returns" OR "financial performance") AND ("sustainable investing") AND "sustainability"	Sustainable Investing by Hanna Silvola and Tiina Landau	*'Scientific research is increasingly showing that sustainable investing is profitable, and investors do not need to compromise on returns to promote sustainability'* This study identifies a number of reasons: 1. A sustainable investment generates better returns over the long term, with smaller risks. 2. A responsible company has better access to financing, with a smaller cost of capital. 3. Customers of responsible companies are more loyal during recessions. 4. Environmentally sustainable companies are valued higher during public listings. (Silvola & Landau, 2021).
("Returns" OR "financial performance") AND ("sustainable investing") AND "sustainability"	Exploring the research landscape of socially responsible investment through bibliometrics by Sangeetha Narayanan and Subhendu Kumar Pradhan	This study points out some studies that revealed that compared to traditional investing, sustainable investing may yield larger returns and lower risks. (Narayanan & Kumar Pradhan, 2023)
("ESG" AND "financial performance") AND "returns" AND "investing"	Building a better future with sustainable investments: Insights from Recent Research by Kumar Manaswi, Archana Singh and Vikas Gupta	This study shows that ESG investments have the potential to deliver comparable or better financial returns than traditional investments, while also having a positive impact on society and the environment. (Manaswi, Singh, & Gupta, 2023)

After examining the database Scopus, we also found some interesting articles on the internet. Therefore, we include these in the research as well. The relevant articles are discussed in Table 16.

Table 16: Other relevant articles on sustainable investing.

	Drawing Up the Bill: Does Sustainable Investment Affect Stock Returns Around the World? by Matthijs van Dijk, Phillip Krüger and Romulo Alves	This study indicates that ESG investing over the past 20 years is not systematic at the expense of returns. (van Dijk, Krüger, & Alves, 2022)
	From 'why' to 'why not': Sustainable investing as the new normal by McKinsey Company	McKinsey and Company performed an internal study about sustainable investing. They state that several studies have shown that sustainable investing and investment returns are positively correlated. However, according to them, other studies have shown no correlation. (McKinsey&Company, 2017).
	ESG and financial performance: Aggregated evidence from more than 2000 empirical studies by Timo Busch, Alexander Bassen and Gunnar Friede	This study shows that sustainable investing is uncorrelated with poor returns (Friede, Busch, & Bassen, 2015).

These studies show that sustainable investing may not lead to lower returns. In fact, some studies claim that investing in sustainable companies in fact can lead to higher returns.

To determine whether sustainability has an impact on the performance of financial products in the organisation, we perform a financial analysis. Here, we have chosen to analyse only one financial product, as it is not possible to examine several financial products in the timeframe of the research.

7.2 Analysis performance Income Mandate

For this analysis, we use financial product Income Mandate, a financial product of Discretionary Portfolio Management. We choose this financial product because the client portfolio in Discretionary Portfolio Management is the same as the model portfolio of the organisation. Due to confidentiality issues, it is not possible to analyse a client portfolio, but the model portfolio can be used for this.

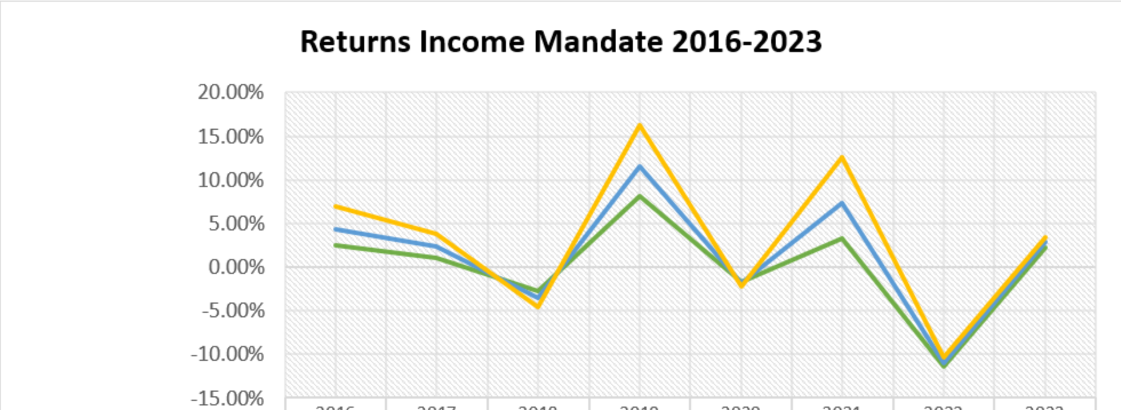
7.2.1 Development return on Income Mandate

To investigate whether sustainability has an impact on the model portfolios' returns, we carried out an analysis on the returns of the Income Mandate. This analysis also shows the relative return. The relative return shows how well the portfolio behaves compared to the benchmark (Hayes, Relative return: what it means, how it works, 2022). Looking at the returns in Table 17, we can see that the portfolio's return was positive in 2021, after which it became negative before recovering in 2023. However, from these data we cannot concluded what the influence of sustainability is on the model portfolio's return.

Table 17: Returns Income Mandate 2021-2023; returns are taken from the organisation, 2023.

		Return portfolio	Return Benchmark	Relative return
Defensive	2021	3.28%	2.30%	0.96%
	2022	**-11.35%**	**-10.99%**	**-0.40%**
	2023	2.23%	2.86%	**-0.62%**
Moderately offensive	2021	12.57%	9.88%	2.45%
	2022	**-10.40%**	**-10.72%**	0.36%
	2023	3.38%	4.37%	**-0.95%**
Moderately defensive	2021	7.32%	5.51%	1.72%
	2022	**-11.01%**	**-10.86%**	-0.17%%
	2023	2.82%	3.52%	**-0.67%**

Figure 33 shows these returns from 2016 to 2023.



	2016	2017	2018	2019	2020	2021	2022	2023
Defensive	2.55%	1.06%	-2.76%	8.15%	-1.76%	3.28%	-11.35%	2.23%
Moderately defensive	4.30%	2.36%	-3.57%	11.56%	-1.90%	7.32%	-11.01%	2.82%
Moderately offensive	6.96%	3.84%	-4.65%	16.20%	-2.28%	12.57%	-10.40%	3.38%

Figure 33: Returns Income Mandate 2016-2023.

7.2.2 Return Income Mandate versus AEX and S&P500

To get a better understanding of how the model portfolio and benchmark behave compared to the market, we compare the returns of them with the returns of the S&P500 and AEX. Here, we choose the risk profile offensive because it consists almost entirely of equities and therefore compares well with the AEX and S&P500, since these are two major equity indices. Figure 34 shows these returns.

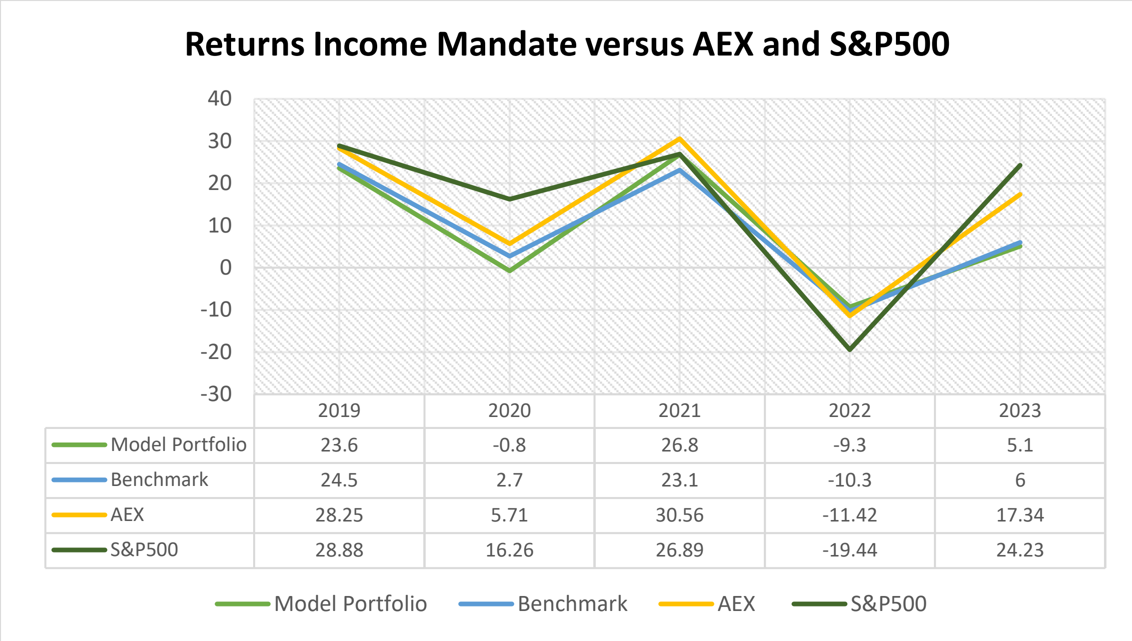


Figure 34: Returns Income Mandate versus S&P500 and AEX.[6]

If we look at Figure 34, returns move in the same direction, with the S&P500 having a larger deviation compared to the other three. This is due to the fact that the returns of the S&P 500 are denominated in dollars. This causes a difference in return compared to the other three since there is a difference in value of the Euro and US dollar. However, we cannot further infer the impact of sustainability on the returns of the organisation's model portfolio based on these data.

7.2.3 Comparing model portfolio Income Mandate with benchmark

To investigate the impact of sustainability on the Income Mandate in the organisation, we compared the model portfolio of the Income Mandate with the organisation's benchmark for a shorter period of time. Benchmarking is a tool that investors use to measure the performance of their portfolio against a standard that represents the market (Faster Capital, 2023).

Benchmark

The benchmark the organisation uses consists of the equities and fixed income indices shown in Table 18.

Table 18: Composition of the benchmark; benchmark taken from the organisation, 2024.

Equity
50% MSCI Europe
40% MSCI ex Europe
10% MSCI Emerging Market (EUR)
Fixed income
50% JPMorgan Emerging Market bond index
50% JPMorgan Corporate Emerging Market bond index

[6] AEX index returns source: (Curvo, 2023) S&P500 returns source: (Macrotrends, 2023).

The benchmark consists of the same instruments for all risk profiles, only the distribution of equities/fixed income indices is different for each risk profile. Recall the asset allocation in Table 19 (Section 3.3).

Table 19: Recall Asset Allocation (AA); table derived from the organisation, 2023.

Asset category	Very defensive	Defensive	Moderately defensive	Moderately offensive	Offensive	Very offensive
Equities	0%	20%	35%	55%	75%	90%
Fixed income	90%	70%	55%	35%	15%	0%
Alternative investments	0%	0%	0%	0%	0%	0%
Liquidities	10%	10%	10%	10%	10%	10%

For example the risk profile defensive consists of 20% equities and 70% fixed income. This means that 20% of the portfolio consists of 50% MSCI Europe, 40% MSCI ex Europe and 10% MSCI Emerging Market (EUR). The 70% of fixed income consist of 50% JPMorgan Emerging Market and 50% JPMorgan Corporate Emerging Market bond index. Table 20 shows the composition of the benchmark of risk profile Defensive.

Table 20: Composition benchmark risk profile Defensive.

Risk profile Defensive	
Equities	
Calculation	Composition portfolio
20% × 50% MSCI Europe	10% MSCI Europe
20% × 40% MSCI ex Europe	8% MSCI ex Europe
20% × 10% MSCI Emerging Market (EUR)	2% MSCI Emerging Market (EUR)
Fixed income	
Calculation	Composition portfolio
70% × 50% JPMorgan Emerging Market bond index	35% JPMorgan Emerging Market bond index
70% × 50% JPMorgan Corporate Emerging Market bond index	35% JPMorgan Corporate Emerging Market bond index
Liquidities	
Calculation	Composition portfolio
10% Euribor 1-month	10% Euribor 1-month

Comparing Income mandate with benchmark

The data in Table 21 show the return of the Income Mandate compared to the benchmark. Here, we take the returns from November at the end of each year. Furthermore, Figure 35 shows the development of the risk profile moderately offensive. We zoom in on one risk profile to get an even clearer picture of how the portfolio changes over time.

Table 21: Return per period Income Mandate; table derived from the organisation, 2023.

	2023		2022		2021		2020		2019	
	Port.	**Bench.**	**Port.**	**Bench.**	**Port.**	**Bench.**	**Port.**	**Bench.**	**Port.**	**Bench.**
Defensive	2.3	2.9	-11.5	-11.0	5.2	4.0	1.3	2.5	8.3	8.3
Moderately defensive	2.9	3.6	-11.2	-10.8	10.0	7.9	0.8	2.8	11.5	11.8
Moderately offensive	3.3	4.4	-10.6	-10.7	16.3	13.3	0.4	3.0	16.1	16.6
Offensive	4.4	5.3	-10.5	-10.6	22.1	18.9	-0.1	2.9	20.9	21.6
Very offensive	5.1	6.0	-9.3	-10.3	26.8	23.1	-0.8	2.7	23.6	24.5

Note: These results are net of running costs and before the costs charged by the organisation.

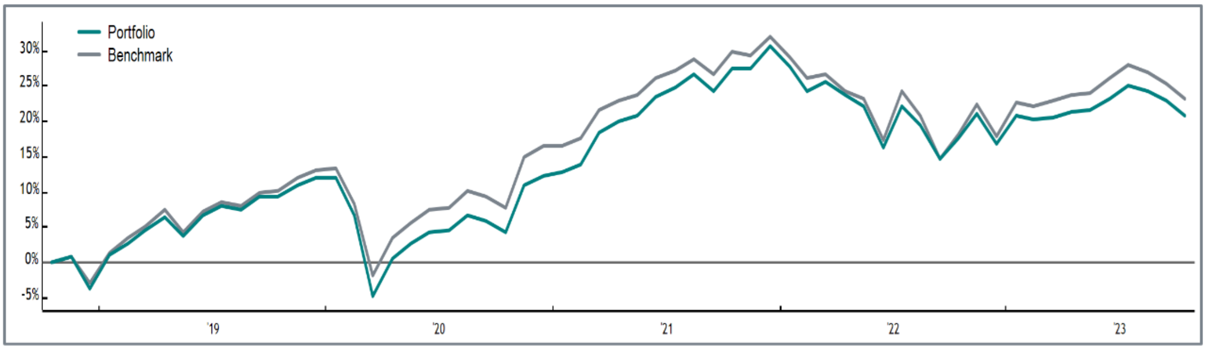


Figure 35: Return development risk profile moderately offensive Income Mandate; figure derived from the organisation, 2023.

We analysed the data and discussed them with employees of the organisation who are knowledgeable on the subject. Three key findings emerged from this:

1. **2020 and 2021**
   In 2020 and 2021, we see a strongly rising market. At the same time, we see here a large deviation between the portfolio performance and the benchmark. This may be because the benchmark is larger than the organisation's model portfolio. The MSCI Europe has already 425 constituents ((MSCI, 2023), and the MSCI is only one component of the benchmark. The model portfolio consists of only 25 equities and bonds. A larger portfolio makes it easer to build a diversified portfolio. A diversified portfolio can absorb price fluctuations better than a less diversified portfolio (Evi van Lanschot, 2023). And this in turn may affect the portfolio return.
2. **2022**
   In the beginning of 2022, before the introduction of sustainability in the model portfolio, the model portfolio develops roughly in line with the benchmark.
3. **Mid-2022 to 2023**
   a. From mid-2022, we again see a larger gap between the benchmark and the organisation's model portfolio. The regulation relating to sustainability took effect from 1 August 2022, but the organisation has already chosen to transform their model portfolios step by step to sustainable model portfolios before 1 August 2022. The organisation chose to do it gradually because otherwise it would have a too great effect on the market. After all, clients have to sell part of their portfolio, buying sustainable investments in return. Doing this for all clients at the same time has a big impact on the market. Hence, the gradual approach was preferred. So, the organisation started this mid-2022.

b. During this period, the organisation's benchmark portfolio remains the same. At the same time, clients are forced to sell part of their portfolio and buy sustainable investments in return. Whereas this normally happens at a favourable time in the market (which benefits returns), it now had to be done compulsorily at a certain time.

Based on this analysis, we see a clear difference between a rising market and a non-rising market. In the rising market (2020 and 2021) we see a difference between the model portfolio and benchmark. However, beginning 2022 the benchmark and model portfolio are in line with each other, whereas from mid-2022 we again see a bigger difference between the benchmark and model portfolio.

7.2.4 Analysis of financial parameters Income Mandate

Next, we analyse some financial parameters of the Income Mandate. Here, we chose to compare data of the Income Mandate of April 2022 and September 2023. We choose these dates because in April 2022, sustainability aspects had not yet been implemented in the model portfolio. In September 2023, they had been. This way, we can analyse the impact of sustainability aspects on the model portfolio. By identifying this impact, it is possible to determine whether enough attention is currently being paid to sustainability and the effect on returns in the organisation.

Total volatility
The volatility is a measure of the model portfolio's overall risk. The higher the volatility is of the portfolio, the greater the variance of the individual assets in the portfolio and hence the greater the risk of the portfolio (Hayes, 2023). Looking at the data from April 2022 and September 2023 in Table 22, we can conclude that there is not a big difference in the volatility. However, we can conclude that the volatility is lower in September 2023 for all risk profiles except very defensive. The model portfolio in September 2023 with sustainability aspects therefore has lower risk than the model portfolio of 2022.

There may be an explanation for why the volatility in September 2023 is close to the volatility of April 2022 for risk profile very defensive. This can be due to the rising interest rates in the bond market that was taking place in 2023. With risk profile very defensive, the model portfolio consists almost entirely out of bonds. An increase in the interest rate on bonds in the market therefore has an adverse effect on the bonds in the model portfolio. The bonds in the model portfolio have to be sold and new bonds with better interest rates should be bought in return. This affects the volatility of the model portfolio.

Table 22: Total volatility Income Mandate; data derived from the organisation, 2023.

	Very defensive	**Moderately defensive**	**Defensive**	**Moderately offensive**	**Offensive**	**Very offensive**
April 2022	4.2%	6.1%	7.7%	9.8%	12.6%	13.6%
September 2023	4.21%	5.47%	7.10%	9.28%	12.19%	13.04%

Total correlation to Benchmark
Table 23 shows the total correlation to the benchmark used by the organisation. The value of the correlation shows the degree to which the portfolio performance is related to the benchmark (Chen, 2022). Here, the correlation can be roughly divided into three categories:

1. **Correlation of -1.0**
   A correlation of -1.0 shows a perfect negative correlation. This means that the portfolio and the benchmark are not at all in alignment.
2. **Correlation of 0**
   A correlation of 0 shows zero or no relationship between the movements of the portfolio and its benchmark.
3. **Correlation of 1.0**
   A correlation of 1.0 shows a perfect positive correlation. This means that the portfolio and benchmark are exactly following one another.

Looking at Table 23, these data show us that the portfolio of September 2023 is closer linked to the benchmark. Here, the correlation to benchmark is closer to 1 than in April 2022. The model portfolio of the organisation is closer to the benchmark in terms of strategic asset allocation in September 2023 than in April 2022.

Table 23: Correlation to Benchmark Income Mandate; data derived from the organisation, 2023.

	Very defensive	Moderately defensive	Defensive	Moderately offensive	Offensive	Very offensive
April 2022	0.88	0.96	0.96	0.95	0.95	0.94
September 2023	0.98	0.99	0.99	0.99	0.99	0.99

Total Beta to Benchmark
Table 24 shows the total beta to the benchmark used by the organisation. The beta is a measure of the volatility of the portfolio compares to the benchmark used by the organisation (Kenton, 2022). Also here, the beta can be divided into four categories:

1. **Beta equal to 1.0**
   A beta of 1 indicates that the security's price tends to move with the market, although this does not always have to be the case. A beta of 1.0 does not imply that the correlation also has to be close to 1.0. A beta of 1.0 implies an average level of systematic risk. This suggests that the portfolio rises and falls at the same percentage as the benchmark (Mullins, 1982).
2. **Beta less than 1.0**
   If the beta of the portfolio is less than 1.0, it means that the portfolio is less volatile than the benchmark. This implies a low level of systematic risk. The portfolio is then less sensitive to market swings than the benchmark (Mullins, 1982).
3. **Beta greater than 1.0**
   If the beta of the portfolio is greater than 1.0, it means that the portfolio is more volatile than the benchmark. This implies a higher level of systematic risk. The portfolio is then very sensitive to market changes (Mullins, 1982).
4. **Beta negative**
   A negative beta means that the portfolio is inversely correlated with the benchmark.

Looking at Table 24, the data show that especially risk profiles very defensive and moderately defensive were more volatile in April 2022 compared to the benchmark. For risk profiles moderately offensive, offensive and very offensive, the portfolio was less volatile in April 2022 compared to the benchmark. When looking at September 2023, the betas are more closely to 1.0 which means that the portfolio is strongly correlated with the benchmark. This was thus to a lesser extent the case in April 2022.

Referring this to the systematic risk, we can conclude two things:

1. **Risk profiles Very Defensive, Moderately Defensive and Defensive**
   For these risk profiles, the beta is higher in April 2022 than September 2023. Again here, there may be an explanation for why the systematic risk is higher in April 2022 than September 2023 for these risk profiles. This again may have to do with the rising interest rates on the bond market in 2023. The rise has required the organisation to make changes to its current model portfolio. These changes reduce the risk on the model portfolio but increases the portfolio's volatility (Table 22). Since these three risk profiles invest a lot in bonds, this has the most effect on them.
2. **Risk profiles Moderately offensive, Offensive and Very Offensive**
   For these risk profiles, the beta is lower than 1 in April 2022 than September 2023. This implies that the portfolio in April 2022 is less volatile than the benchmark which gives the portfolio a lower systematic risk.

Table 24: Total Beta to Benchmark Income Mandate; data derived from the organisation, 2023.

	Very defensive	**Moderately defensive**	**Defensive**	**Moderately offensive**	**Offensive**	**Very offensive**
April 2022	1.38	1.16	1.00	0.86	0.84	0.78
September 2023	1.02	0.99	0.98	0.93	0.95	0.89

Consistency check
To check whether the beta obtained is correct, the following formula was used

$$Beta = Correlation\,portfolio\;to\;benchmark\;\times \frac{Volatility\;portfolio}{Volatility\;benchmark}$$

The volatility of the portfolio (Table 22) and the correlation of the portfolio to benchmark (Table 23) are already known. The organisation calculated the volatility of the portfolio and benchmark with a blind factor model and a principal component analysis with data from the past 180 weeks. By principal component analysis, the 77 most explanatory factors for risk are determined for both the portfolio and benchmark. A regression analysis follows which calculated the volatility of the portfolio and benchmark based on the 77 factors of risk. We used this volatility together with the correlation to calculate the beta of the portfolio to the benchmark using the formula above.

Table 25: Calculation beta April 2022; data (except the beta) derived from the organisation, 2024.

April 2022	**Very defensive**	**Moderately defensive**	**Defensive**	**Moderately offensive**	**Offensive**	**Very offensive**
Correlation	0.88	0.96	0.96	0.95	0.95	0.94
Volatility portfolio	4.2%	6.1%	7.7%	9.8%	12.6%	13.6%
Volatility benchmark	2.7%	5.1%	7.4%	10.8%	14.2%	16.3%
Beta	1.368	1.148	0.998	0.862	0.842	0.784

Table 26: Calculation beta September 2023; data (except the beta) derived from the organisation, 2024.

September 2023	Very defensive	Moderately defensive	Defensive	Moderately offensive	Offensive	Very offensive
Correlation	0.98	0.99	0.99	0.99	0.99	0.99
Volatility portfolio	4.21%	5.47%	7.10%	9.28%	12.19%	13.04%
Volatility benchmark	4.02%	5.45%	7.20%	9.87%	12.69%	14.45%
Beta	1.026	0.994	0.976	0.930	0.950	0.893

Table 25 and Table 26 show all the data needed to calculate the beta, which is also present in the table. These data show that the beta is consistent. There is minimal difference in the beta of April 2022 for risk profiles very defensive and moderately defensive compared to the beta shown in Table 24. This is because the beta calculated in Table 24 was calculated by the organisation and they performed the calculations with the unrounded numbers. For this research, only the rounded numbers are at disposal.

7.2.5 Conclusion based on financial data analysis

The data analysis shows than the sustainable model portfolio in 2023 deviates more from the benchmark than the model portfolio in 2022 where sustainability aspects have not yet been implemented. Reference is made once again to Figure 36, where this difference is made clear. Arrow one here refers to the model portfolio in 2022 that has no sustainability aspects yet. Arrow two refers to the sustainable model portfolio in 2023.

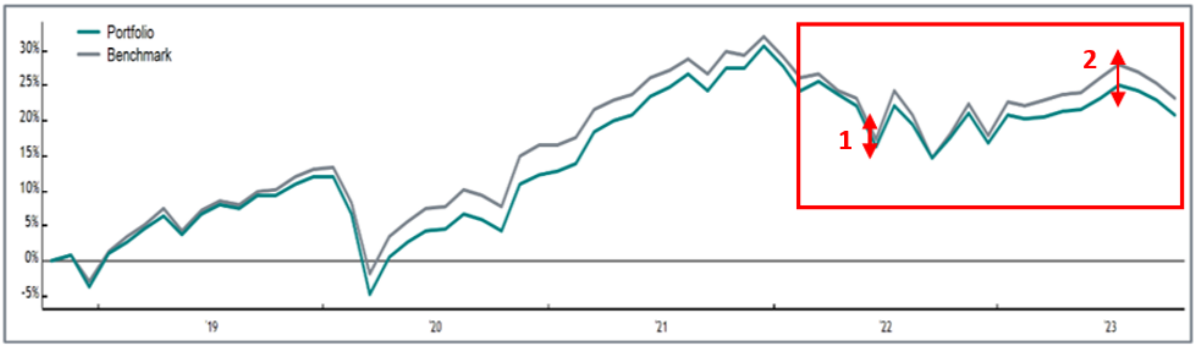


Figure 36: Difference return model portfolio and benchmark 2022 and 2023.

When we look at the financial parameters which we analysed, we can conclude the following:

1. The model portfolio of April 2022 in which sustainability aspects have not yet been implemented fluctuates more than the sustainable model portfolio of September 2023.
2. The model portfolio of 2023 has a higher systematic risk compared to the model portfolio of 2022 for the higher risk profiles. For the lower risk profiles, the sustainable model portfolio of 2023 has a lower systematic risk than the model portfolio of 2022.

7.2.6 Sustainability aspects in the organisation

Thus, literature shows that sustainability does not necessarily have to have a negative impact on portfolio returns. Looking at the financial analysis of data from the organisation, we see that the sustainable model portfolio in 2023 deviates more from the benchmark than the model portfolio in 2022 which does not yet include these sustainability aspects. In addition, we also see that there is a difference in the financial parameters of the model portfolios of 2022 and 2023. However, in both cases, we cannot conclude with significance that this is due to the sustainability aspects implemented in the model portfolio in 2023. We therefore recommend the organisation to perform future research on the impact of sustainability on portfolio returns.

However, what we can conclude is that not all investors look at sustainable investments negatively. For instance, investors indicate that they are quite willing to expand their sustainable investments should there be more clarity on how those investments lead to positive social change (FD, 2023). In addition, investors indicate that they are also willing to sacrifice some of their returns if they can make sustainable impact (Bauer, Ruof, & Smeets, 2021). The organisation's data analysis confirms these findings. 24,5% of the clients indicate that they have no ESG preference and prefer to not invest sustainably (see Figure 29). Despite the fact that these clients prefer not to invest sustainably, they still continue to invest with the organisation even if it means they do have to invest sustainably and thus possibly sacrifice returns.

Despite the ambiguity of the impact of sustainability on returns, the organisation is currently incorporating sustainability well into its policies. With the introduction of the regulation, a new section was implemented in the Investor profile questionnaire (IPQ) (recall Section 5.2) related to sustainability. This involves identifying the client's sustainability preferences and engaging the advisor in a conversation with the client about sustainability. In addition, sustainability is now also incorporated into the brochure that the client is required to read before he can invest with the organisation.

The feasibility analysis (recall Section 5.2.4) which is discussed with the client is based on the benchmark returns. The model portfolios the organisation uses are based on the benchmark. However, the model portfolios change each time, and the benchmark remains the same. Hence, the organisation used the benchmark for the feasibility analysis in the IPQ. If a client has an investment horizon of 10 years, the analysis uses the benchmark returns of the past 10 years. It should be kept in mind that in the past, the benchmark did not have to comply with legislation and the moment it contained one sustainable instrument, it could already be called sustainable. In addition, ESG ratings were not assigned to instruments in the past. The feasibility analysis therefore does use a past sustainable benchmark. So, sustainability is included in the feasibility analysis, but it is difficult to indicate how sustainable the benchmark used to be in the past because there were no regulations back then. The advantage of the introduced regulation is that there is now an unambiguous policy on when something is sustainable. This makes it easier to compare things in terms of sustainability in the future, because we then know better to what extent a model portfolio or benchmark is sustainable.

8 Conclusion

8.1 Final considerations

To conclude, we investigated whether there are discrepancies between the calculated and chosen sustainability profiles of investment clients of a Dutch bank and to what extent sustainability affects the performance on their investment portfolios. The main question in this research was:

"Is there a discrepancy between the calculated and chosen sustainability profile of Investment Advice and Discretionary Portfolio Management clients? To what extent does sustainability affect the performance of investment portfolios of Investment Advice and Discretionary Portfolio Management clients?"

The reason for the study was the MiFID II ESG regulation that came into force on the 2nd of August 2022. MiFID II ESG is an adaption to the action plan of MiFID II to integrate sustainability and forces the organisation to classify its instruments with an ESG rating, ask clients about their sustainability preferences and should include ESG factors in its investment policies (Research Question 1). Since the regulation has only been in effect for a year, the organisation wanted to understand more about the choices clients make in terms of sustainability.

The organisation has drawn up five sustainability profiles based on the Sustainable Finance Disclosure Regulations (SFDR): non-sustainable, ESG starter, ESG Advanced, Sustainable Impact and EU Taxonomy. The organisation decided to link these sustainability profiles to its financial products (Research Question 2). This means that the clients to whom the regulation applies in Investment Advice and Discretionary Portfolio Management, must now choose a sustainability profile in addition to their investment concept, financial product and risk profile. The client's choice of investment concept, financial product, risk profile and sustainability profile is made using the IPQ. The IPQ calculates a sustainability profile for the client. However, the client can choose another sustainability profile than the one calculated by the IPQ (Research Question 4).

The data analysis has shown that there is are discrepancies between calculated and chosen sustainability profiles. In Investment Advice, 40% of the clients choose a sustainability profile different from their calculated sustainability profile, In Discretionary Portfolio Management this percentage is 25%. The reasons for these discrepancies are that clients prefer to keep their current financial products, some clients want a financial product that does not match with their calculated sustainability profile, some clients have no ESG preference and other clients do not understand the questions in the IPQ. To solve the problem of this last group of clients, we recommend that the organisation integrates control questions in the IPQ to make sure clients understand the questions asked in the IPQ (Research Question 5).

An interesting aspect emerged from the data analysis. It appears that some clients have a chosen sustainability profile that does not match with their financial product. Interviews with employees have shown that this is due to two reasons: incorrect completion of the IPQ by advisors and human errors also made by the advisors. To prevent these mistakes in the future, we recommend that the organisation provide additional training to advisors. In addition, we recommend making changes to the IPQ system, so that advisors can only archive the IPQ once the client has signed the contracts, with the right sustainability profile that matches his financial product (Research Question 5). Furthermore, we recommend an independent audit quarterly to ensure that the internal system of the organisation remains compliant with its policy and the regulation.

In addition, we recommend to stop offering Customized Advice in Investment Advice. This is the only financial product in Investment Advice that is non-sustainable and therefore it does not contribute to the goal of the organisation to become the most sustainable bank in The Netherlands. Furthermore, the data analysis shows that 96% of the clients in Customized Advice choose a profile that is sustainable. These clients can switch to financial product Active ESG (plus) Investment Advice (with a lower entry value (€500,000) and lower costs (4%) for the clients).

We performed a literature study to see which effects sustainability has on the return of clients' portfolio, to determine whether the organisation places enough emphasis on the influence of sustainability on returns. We performed an additional literature study on the impact of sustainability on portfolio returns. Whereas some literature studies indicated that the returns are higher from sustainable investment, other studies cannot find a relationship between sustainable investments and the returns (Research Question 6).

To see whether we can supplement the literature, we performed a financial analysis on the Income Mandate. This financial analysis indicated that the difference between the return of the benchmark and sustainable portfolio is greater than in 2022, when the portfolio is non-sustainable. However, we cannot conclude with significance that this is due to the sustainability aspects implemented in the model portfolio in 2023. We therefore recommend the organisation to perform future research on the impact of sustainability on portfolio returns. Despite the ambiguity of the impact of sustainability on returns, the organisation is currently incorporating sustainability into its policies. A new section is implemented in the IPQ related to sustainability, and with this section the sustainability preferences of clients can be determined. In the IPQ, sustainability is also included in the feasibility analysis (Research Question 6).

8.2 Discussion and limitations

The findings of this research provide insights into the sustainability choices clients of the organisation make. We also analysed the impact of sustainability on portfolio returns. For the study, we used data from the organisation. However, the research is more broadly applicable. It also creates insights for other banks, financial institutions and others covered by the MiFID II ESG regulations. In addition, the research is of interest to investors who also want to learn more about the impact of sustainability on investment portfolios.

We needed to take into account a number of limitations during the research:

1. Clients may not be interviewed. It was therefore not possible to validate found reasons for the discrepancies between the calculated and chosen sustainability profiles of clients. For this purpose, employees of the organisation were interviewed, and client satisfaction had been consulted.
2. All data had to be expressed in percentages in the report. Furthermore, the number of clients and the asset under management amounts in Investment Advice and Discretionary Portfolio Management (DPM) were not allowed to be mentioned in the report.
3. The company may not be named in the report; hence the company is called *The organisation.* This also made citing sources more difficult, as documents from the organisation that were consulted were also not allowed to be mentioned by name.
4. Due to time constraints, it was not possible to perform the financial analysis for multiple financial products in the organisation. The results from this analysis are therefore based on one financial product. The conclusions from this analysis are therefore not (yet) generalizable.

8.3 Future research

We formulated some improvements for future research, based on the discussion and limitations of this research:

1. Since no interviews were allowed to be conducted with clients during the research, we recommend that advisors have conversations with their clients. Based on these conversations, it can be better determined why clients deviate from the calculated sustainability profile in the IPQ. In addition, these conversations can validate the findings of this research.
2. We recommend that the organisation investigates in the future how it can improve its current IPQ system, as it appears that not all clients currently understand the questions from this system.
3. As there was a time constraint, it was not possible to analyse all financial products in the organisation. The organisation must do this itself to get a better understanding of the impact of sustainability on investment portfolios and their returns.
4. Sustainability is a relatively new concept in the investment world. We recommend that the organisation continues to monitor this development closely. Based on these developments, the organisation can implement changes in its financial product offering in order to reach its own goals in terms of sustainability, but also to keep up with the market and the needs of this market.
5. The analysis in this study shows an indication that the sustainable model portfolio in 2023 deviates more from the benchmark than the model portfolio in 2022. Further research should be conducted to show whether this deviation is significant and structural.
6. Data have only been analysed from clients in the Netherlands. However, the organisation also has branches and clients abroad. Analysing these data also can lead to new insights.

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